R E P O R T R E S U M E S

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LINCOLN LEARNING CENTER, AN EXPERIMENTAL JUNIOR HIGH SCHOOL OF THE MINNEAPOLIS PUBLIC SCHOOLS--SUMMARY OF EVALUATION PROCEDURES AND RESULTS FOR THE FIRST TWO YEARS, 1964-1966. A RESEARCH REPORT.

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DESCRIPTORS- *PROGRAM EVALUATION, *JUNIOR HIGH SCHOOLS, *DISADVANTAGED YOUTH, *EXPERIMENTAL PROGRAMS, ATTENDANCE, MATCHED GROUPS, RESEARCH PROBLEMS, MEASUREMENT INSTRUMENTS, ACADEMIC ACHIEVEMENT, STUDENT ATTITUDES, TEACHER ATTITUDES, PARENT ATTITUDES, TABLES (DATA), STANDARDIZED TESTS, INSTRUCTIONAL STAFF, SELECTION, MINNEAPOLIS, MINNESOTA, LINCOLN LEARNING CENTER

THIS EVALUATION OF AN EXPERIMENTAL JUNIOR HIGH SCHOOL PROGRAM IN MINNEAPOLIS PRESENTS DATA DERIVED FROM TWO YEARS OF OPERATION. THIS SCHOOL WAS ESTABLISHED TO EXPLORE METHODS OF GIVING MEANINGFUL EDUCATION TO 45 DISADVANTAGED STUDENTS. IT WAS LOCATED IN A SEPARATE FACILITY AND, DURING THE FIRST YEAR, STAFFED BY EIGHT TEACHERS. THIS EXPERIMENTAL GROUP WAS MATCHED WITH A CONTROL GROUP WHO REMAINED AT THE PARENT SCHOOL. THE REPORT FOCUSES ON THE EXPERIMENTAL EVALUATION DESIGN AND ON THE MEASURING INSTRUMENTS. IT INCLUDES INFORMATION ON THE FIRST-YEAR EVALUATION PROGRAM, STAFF CHARACTERISTICS, SELECTION OF STUDENTS, AND BASELINE DATA. FOR THE SECOND YEAR IT PRESENTS DATA ON MEASURES OF ACHIEVEMENT AND ATTITUDES, TEACHER AND PARENT OPINIONS, AND ATTENDANCE. THE DATA FROM THE FIRST YEAR SHOWED THAT THE EXPERIMENTAL AND CONTROL GROUPS WERE WELL-MATCHED, AND ALTHOUGH NOT STATISTICALLY SIGNIFICANT, THE FINDINGS OF THE EVALUATION REVEALED A "CONSISTENT TENDENCY" FOR EXPERIMENTAL STUDENTS TO SCORE BETTER THAN THE CONTROLS. RECOMMENDATIONS FOR FUTURE EVALUATION OF THIS JUNIOR HIGH SCHOOL ARE INCLUDED. (NH)

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LINCOLN LEARNING CENTER

AN EXPERIMENTAL JUNIOR HIGH SCHOOL OF THE MINNEAPOLIS PUBLIC SCHOOLS

ED 04933

SUMMARY OF EVALUATION RESULTS THE FIRST TWO YEARS 1964 - 1966

A RESEARCH REPORT

APRIL 1967

Special School District No. 1

Minneapolis, Minnesota

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Lincoln Learning Center

An Experimental Junior High School

of

The Minneapolis Public Schools

Summary of Evaluation Procedures

and Results for the First Two Years

1964-65 - 1965-66

Compiled by

R. W. Faunce

UD 004 933

April 1967
Special School District No. 1
Minneapolis, Minnesota

Summary

This report describes first and second year evaluation procedures and results for an Experimental Junior High School operated by the Minneapolis Public Schools. This school, located in an abandoned printing shop and now called the Lincoln Learning Center, was established in 1964 to explore new methods of giving a meaningful education to 45 disadvantaged youth who were not profiting from the traditional school experience and who seemed likely to drop out of school before graduating.

First Year Evaluation:

Experimental and control students were carefully selected to assure inclusion of "appropriate" students in the project. The procedures employed assured selection of low income students who gave evidence of declining school achievement, poor attendance, high mobility, and family disruption. Racial and sexual distributions were proportionate to the parent school or the "dropout prone" population (pp. 27-28).

Students from both groups were found to be deficient in reading ability (pp. 30-31), low in self esteem, confused about self perception, suggestible, low in impulse control, and high in signs of maladjustment (p. 43). They held relatively favorable attitudes toward school and education but poor attitudes toward teachers, self, family, and being a good citizen (p. 50).

The first year faculty, consisting of eight persons, was seen as a group of "normal, active, outgoing people with sincere interests in their fellow man, and, generally, healthy attitudes toward children." Their vocational interests were consistent with their specific job assignments. However, it appeared that differences of philosophy of education were so divergent as to be detrimental to the progress of the Experimental School (pp. 25-26).

Second Year Evaluation:

Measurements were obtained on school achievement, attitude, teachers' opinions, parents' opinions, and attendance. Fifty-one of 67 statistical tests reported favored the experimental students over the controls although few individual tests attained statistically reliable significance. Results are clouded by inadequate description of a newly selected control group and incompletely reported data (pp. 57-58).

A more complete summary of first and second year results may be found on pages 59 and 60.

Some suggestions for future evaluation are given on pages 62 and 63.

At this point in time perhaps the best summarization of the Experimental Junior High School that can be made from an evaluation viewpoint is that results appear promising. Observation of the activities at the school suggest that the school is just beginning to get into high gear and that measurable progress may be made over the next year. It is also possible that major value may be derived from the school in many of the areas which have not been measured or which have been measured inadequately (p. 61).

ACKNOWLEDGMENTS

Evaluation plans and data collection for the first year analysis were carried out while the author was a member of the Youth Development Project (YDP) of the Community Health and Welfare Council of Hennepin County. Mrs. Bonnie Murton, also of the YDP, played an important part in these activities.

Second year evaluation was carried out by Dr. Thomas Brodie, and the federal projects research staff of the Minneapolis Public Schools.

Particular thanks are due the pioneers who staffed the experimental school during the first year: Maurice Britts, Rosemary Hagen, John Maas, Gladys Majzner, Robert Menzel, Sigrunn Kvamme, Phillip Seamans, and Jane Sjotvedt. These people not only had to wrestle with problems posed by a new program, disenchanted youth, and a somewhat uncertain physical plant, but with the carnivorous tactics of researchers involved in a demonstration program. Dr. Fred Roessel, principal of Lincoln Junior High School at the time this program began deserves mention for his support.

A group of University of Minnesota professors also contributed to the evaluation of this program by offering suggestions, giving moral support, and generally acting as a sounding board for YDP personnel during the initial stages of the program. Included in this group were Dean Robert Keller, Professors Robert Beck, Emma Birkmaier, James Curtin, Gerald Firth, Clifford Hooker, Cyril Hoyt, Robert Randleman, E. Paul Torrance, and Frank Wilderson. Professor Torrance also conducted an investigation of creative behavior among the experimental school students and has reported results of this investigation in a separate paper.

Assistance in interpreting several of the standardized measuring instruments used in the evaluation was provided by Drs. Cyril Hoyt and Patricia Faunce of the University of Minnesota, Dr. Thomas Kiresuk, Hennepin County General Hospital, and Dr. William H. Fitts, Nashville, Tennessee, Mental Health Center.

The guidance and support provided by Larry Harris and Don Bevis, former YDP staff members and now with the Minneapolis Public Schools, was present in this program as in all YDP programs.

Acknowledgments listed here refer to those persons who made contributions to the research and evaluation aspects of the Lincoln Learning Center. No attempt has been made to identify the many persons who were involved in the operational aspects of the Center.

Funds for the first year evaluation were provided by a grant made to the Community Health and Welfare Council of Hennepin County by the Office of Juvenile Delinquency and Youth Development. Second year evaluation expenses, and publication expenses for this report, were borne by the Minneapolis Public Schools with support from the Elementary and Secondary Education Act of 1965, the Office of Economic Opportunity, the Minneapolis Foundation, and the Archie D. and Bertha H. Walker Foundation.

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Lincoln Learning Center: An Experimental Junior High School[1]

This paper describes evaluation procedures used to determine the efficacy of an experimental junior high school operated by the Minneapolis Public Schools during the 1964-65 and 1965-66 school years. The paper focuses on the experimental design and the measuring instruments used to evaluate the program rather than attempting to describe the philosophy of the program, the development of curricula, or actual program operations. Operational aspects of the program are described in other reports prepared by the Experimental Junior High School staff. In order to give some semblance of independence to this report, however, a brief review of some of the broader aspects of the experiment will be given.

The Experimental Junior High School originated as a joint effort of the Youth Development Project (YDP) and the Minneapolis Public Schools. The YDP was a delinquency prevention demonstration project of the Community Health and Welfare Council financed by a grant from the U. S. Office of Juvenile Delinquency and Youth Development. As part of its program the YDP proposed an experimental school with curricula adapted to low income youth who did not appear to be profiting from traditional methods of education. Lincoln Junior High School, which served children living in one of the YDP Target Areas and which seemed to have many children who were not profiting from school, was selected as the parent school from which the experimental sample would be drawn.

One major aspect of the program was the physical separation of the experimental students and faculty from the parent school. An abandoned printing shop, a few blocks from Lincoln Junior High, was rented and renovated to serve as the experimental school. Forty-five students and a staff of eight was to be housed in this building for the three year experimental period.

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[1] The term "Experimental" was used in a common-sense manner to describe the school. "Demonstration" is probably more accurate in the scientific sense.

An unfortunate delay in funding did not permit the program to begin in September 1964 as scheduled. This delay had serious consequences for the program. Staff hiring was not completed until January 1965 and students did not enter the new "school," until April 1965. This late beginning date meant that students were in the new setting for only two months prior to summer vacation. For this reason, ninth grade students were not involved during the 1964-1965 school. Instead of fifteen students from each of the seventh, eighth, and ninth grades, as originally planned, the first class consisted of twenty-two seventh and eighth graders. This approach gave each student an opportunity to be in the program for at least one full school year.

Evaluation of the program for the 1964-65 school year, which included only two months of student participation, was carried out by the Youth Development Project. The YDP terminated in 1965, due to a cutback in federal funding, and responsibility for subsequent evaluation of the Experimental Junior High was assumed by the federal projects research team of the Minneapolis Public Schools. This report describes the evaluation procedures used and the results obtained by the YDP and by the federal projects research team. The first two years (1964-65 - 1965-66) of the project are covered. The school is currently (April 1967) in its third and final year of operation as a demonstration project.

The First Year 1964-65

Program Goals

Program goals for the experimental school were described, in a rather general way, in the YDP proposal (Community Health and Welfare Council, 1964, pp. 632-641). The first year school staff attempted to specify these goals in more precise language at the start of the program. Based on numerous discussions, and conferences with other persons interested in the program, the following list of goals was established.

1. Develop a flexible junior high school program to meet the needs of culturally disadvantaged area children who appear to be potential dropouts.

2. Develop a team teaching approach to teaching disadvantaged children.

3. Develop motivational techniques for disadvantaged, non-school oriented children.

4. Develop curricula for students who are oriented to present activities rather than future planning.

5. Develop school success activities to reduce frustration of disadvantaged students.

6. Help individual children understand the need for education and the need to stay in school by helping them see job roles and requirements.

7. Help individual children understand themselves and develop a positive self concept.

8. Help individual children develop their ability to use basic educational tools.

9. Help individual children set short term and long term goals for themselves.

10. Help individual children develop strengths needed to succeed in school.

In view of the dynamic nature of the program and the fact that new avenues of education were being explored it was not surprising that some of these goals were revised in succeeding years. Regardless of subsequent events, it is important to remember that these were the goals at the beginning of the program and that no change has taken place in the major goal of helping disadvantaged children obtain a meaningful education.

Evaluation Goals

Evaluation plans, as well as program plans, were decimated by the funding cutback. Reduction of the proposed research staff permitted only a small number of the desired areas of exploration to be evaluated. Uncertainty

about future funding of the program made long range evaluation plans particularly difficult. For these reasons, the following research goals were developed by the YDP.

1. Describe selected characteristics of the school faculty, as an aid to interpreting faculty-student interactions (related to program goals 1, 2, 3).

2. Assist the faculty in arriving at a statement of "philosophy" for the teaching team (related to all program goals, but most directly to goals 2, 3, 4).

3. Assist in defining the student population and in selecting experimental and control students for the first year.

4. Attempt to collect objective data which could be used as a base for short or long range evaluation of some of the more important aspects of the program.

Data collected under the fourth evaluation goal were designed to:

a. Evaluate reading progress (program goals 8 and 10).

b. Evaluate progress toward the developement of a positive self concept (program goal 7).

c. Evaluate attitudes toward school and work (program goal 6).

No serious attempt was made to directly evaluate program goal 3 (development of motivational techniques. . .) because of lack of existing and adequate measuring instruments, necessity for heavy involvement of staff time, and similar reasons. In the same vein, objectives numbered 4 (curriculum development), 5 (school success activities), and 9 (goal setting) were excluded.

The many specific objectives of the Experimental Junior High program were simply too numerous for a two man research unit to attempt to evaluate, since the unit also was responsible for the evaluation of other YDP programs. Therefore, practicality made limited evaluation goals necessary. While the facets evaluated were considered important, it was apparent that some of the unevaluated aspects of the program were of equal importance.

Procedures and results related to the school staff will be discussed first.

Characteristics of the Experimental School Staff - 1964-65

The staff consisted of eight persons: an intern principal; teachers of industrial arts, home economics, remedial reading, communications (English and social studies); a counselor (one-half time); a social worker (one-half time); and a clerk.

The principal, counselor, social worker, and the industrial arts teacher were men. All faculty members were certified by the State of Minnesota for the positions they filled. The school clerk was considered an integral part of the staff because of the small size of the building and the program and the resulting constant contact with students. Certain characteristics of the faculty, such as teaching experience, age, etc. are not considered in this report. This report describes characteristics measured by "objective" instruments only.

Success of a unique, innovative program such as the Lincoln Learning Center depends primarily on the abilities, interests, and efforts of its faculty. Because of this, great care was taken to describe characteristics of staff members in detail. It is, of course, impossible to say that this program succeeded, or failed, because of the particular persons employed. Too many variables could have influenced the results. Studies of leadership have indicated the complexity of interacting behavior which makes for "success" or "failure" in situations such as the one being described. (See, for example, Cartwright & Zander, 1960, pp. 487 ff; Fleishman, 1955, pp. 205-222.) In this small study, without adequate controls, it would be presumptuous to make claims of causal relationships between teacher characteristics and student behavior. Certainly this cannot be done on the basis of experimentally controlled "evidence." At the same time, it is impossible to refrain from subjective interpretations of the events that took place. Nor should we. A major purpose of an "experiment" is to generate new ideas, new approaches,

and, if you will, new experiments. To this end, an extensive battery of measuring instruments was administered to the faculty of the Experimental Junior High School.

The test battery was selected with two goals in mind. The first goal, was to describe the staff as an aid to interpreting student-faculty interaction and to suggest ideas, however subjective, for program modification. The second goal was to assist the faculty in its efforts to arrive at a statement of purpose, or philosophy, which all faculty members would be able to accept and which would help them in their efforts to become an efficient teaching team. Most of the tests were taken in January 1965. Included in the test battery were:

1. Strong Vocational Interest Blank (SVIB)
2. Minnesota Teacher Attitude Inventory (MTAI)
3. Allport-Vernon-Lindzey Scale of Values (AVL)
4. Minnesota Multiphasic Personality Inventory (MMPI)
5. Meyer Social Attitudes Questionnaire
6. Personal-Social Motivation Inventory
7. Ideal Child Check List
8. Teacher Opinion Questionnaire

The first four measuring instruments were used for descriptive purposes. Instruments 5-8 were primarily developmental tests used to explore possible differences in opinion or philosophy of education among staff members. It was possible to use this time consuming battery only because faculty members were willing, cooperative "guinea pigs" in the true scientific sense, and because of a considerable time lag between faculty recruitment and student assignment to the school.

The SVIB, the MTAI, the AVL, and the MMPI are standardized instruments with long histories of research and publication. Comments on the nature of these instruments appear superfluous. Descriptions of the four developmental in-

struments, however, will be given before results on these tests are discussed.

The Strong Vocational Interest Blank (SVIB)

Forms M and W of the SVIB were administered to the four male and four female staff members (Strong, 1933, 1938). Mean standard scores and profiles for the two groups are shown in Figures 1 and 2. Results for the men were striking. A very definite primary pattern for Group V was revealed. (The eight occupations in Group V are related to each other rather closely, intercorrelations are usually .60 or higher, and the common factor among them is typically called "social service.") Three of the four male teachers had primary patterns in Group V. The profile for the industrial arts teacher differed. Appropriately, his profile showed strong secondary patterns in groups II (Engineering and physical sciences), III (Production manager) and IV (Technical and/or skilled trades).

Thus, the mean profile for the male teachers reflected the social service interests of the counselor, the social worker, and the principal. Since interests are highly specific within the teaching profession (Gage, 1963, pp. 528-531) it is no surprise that the pattern for the industrial arts teacher differed greatly from the other three men. Indeed, it could be a cause for concern if his interest pattern did not differ in the observed direction.

Since the women on the staff represented more diverse fields (secretarial, home economics, remedial reading, social studies and English) than did the men it might be expected that an <u>average</u> interest profile would be less revealing. To a degree this was true. Nevertheless, some scores were revealed which reflected interests of the group and not just interests of one or two of its members. The five highest points on the profile were on the Social Worker, English Teacher, Social Science Teacher, Lawyer, and Physical Education Teacher (College) scales. Average scores for Social Worker and English Teacher were B+ while the average score for the other scales was B. Indivi-

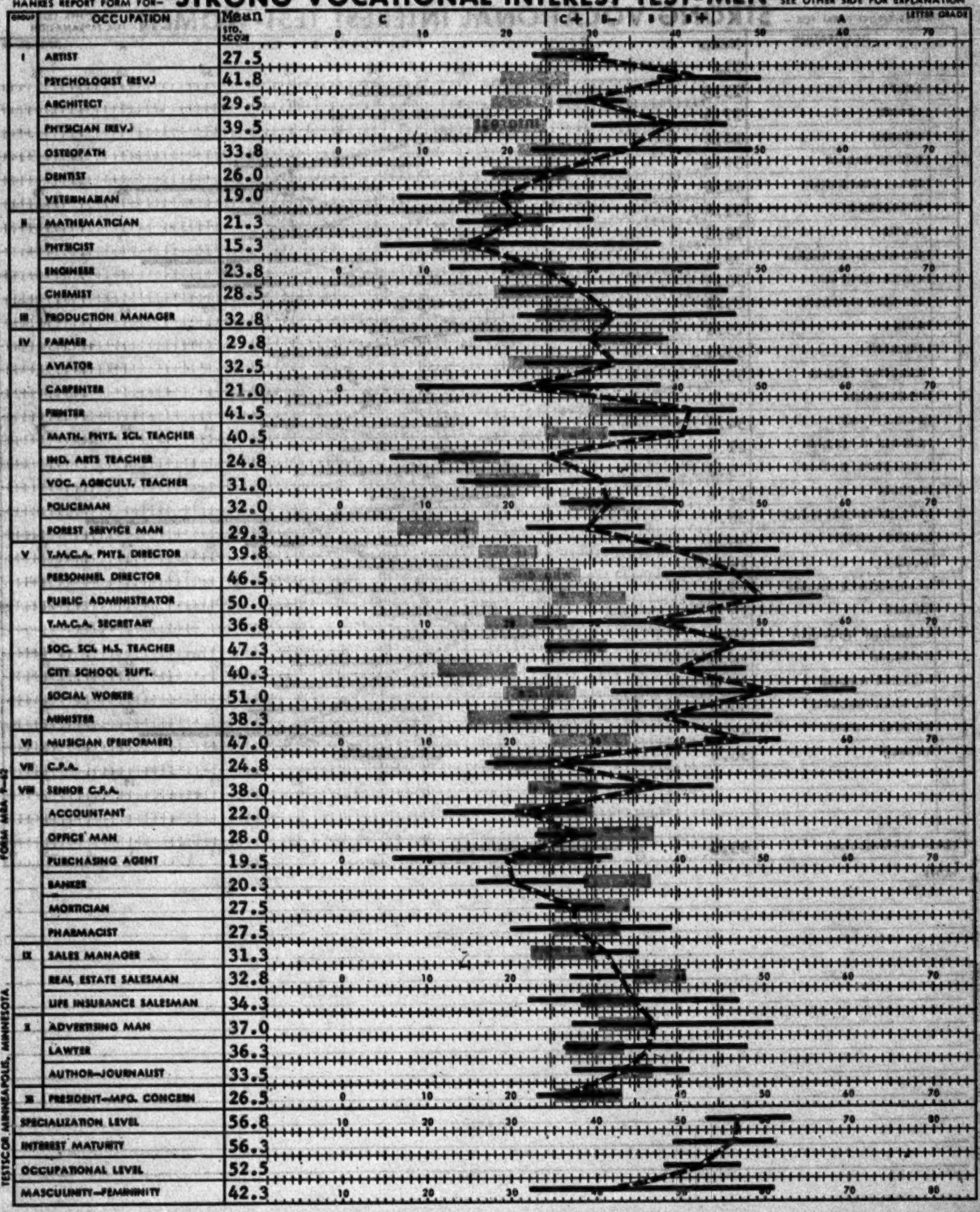
Figure 1

Mean Standard Scores on the Strong Vocational Interest Test for Four Male First Year Faculty Members of the Experimental Junior High School, January 1965

LAST NAME FIRST DATE NUMBER

HANKES REPORT FORM FOR— **STRONG VOCATIONAL INTEREST TEST-MEN** SEE OTHER SIDE FOR EXPLANATION

GROUP	OCCUPATION	Mean STD. SCORE
I	ARTIST	27.5
	PSYCHOLOGIST (REVJ	41.8
	ARCHITECT	29.5
	PHYSICIAN (REVJ	39.5
	OSTEOPATH	33.8
	DENTIST	26.0
	VETERINARIAN	19.0
II	MATHEMATICIAN	21.3
	PHYSICIST	15.3
	ENGINEER	23.8
	CHEMIST	28.5
III	PRODUCTION MANAGER	32.8
IV	FARMER	29.8
	AVIATOR	32.5
	CARPENTER	21.0
	PRINTER	41.5
	MATH. PHYS. SCI. TEACHER	40.5
	IND. ARTS TEACHER	24.8
	VOC. AGRICULT. TEACHER	31.0
	POLICEMAN	32.0
	FOREST SERVICE MAN	29.3
V	Y.M.C.A. PHYS. DIRECTOR	39.8
	PERSONNEL DIRECTOR	46.5
	PUBLIC ADMINISTRATOR	50.0
	Y.M.C.A. SECRETARY	36.8
	SOC. SCI. H.S. TEACHER	47.3
	CITY SCHOOL SUPT.	40.3
	SOCIAL WORKER	51.0
	MINISTER	38.3
VI	MUSICIAN (PERFORMER)	47.0
VII	C.P.A.	24.8
VIII	SENIOR C.P.A.	38.0
	ACCOUNTANT	22.0
	OFFICE MAN	28.0
	PURCHASING AGENT	19.5
	BANKER	20.3
	MORTICIAN	27.5
	PHARMACIST	27.5
IX	SALES MANAGER	31.3
	REAL ESTATE SALESMAN	32.8
	LIFE INSURANCE SALESMAN	34.3
X	ADVERTISING MAN	37.0
	LAWYER	36.3
	AUTHOR—JOURNALIST	33.5
XI	PRESIDENT—MFG. CONCERN	26.5
	SPECIALIZATION LEVEL	56.8
	INTEREST MATURITY	56.3
	OCCUPATIONAL LEVEL	52.5
	MASCULINITY—FEMININITY	42.3



FORM MBA 9—62

TESTS OF MINNEAPOLIS, MINNESOTA

Figure 2

Mean Standard Scores on the Strong Vocational Interest Test for Four Female First Year Faculty Members of the Experimental Junior High School, January 1965

LAST NAME FIRST DATE NUMBER

HANKES REPORT FORM FOR – **STRONG VOCATIONAL INTEREST TEST-WOMEN** SEE OTHER SIDE FOR EXPLANATION

OCCUPATION	Mean STD. SCORE
ARTIST	25.8
AUTHOR	27.5
LIBRARIAN	24.8
ENGLISH TEACHER	39.8
SOCIAL WORKER (REVJ	44.0
PSYCHOLOGIST	31.8
LAWYER	38.5
SOCIAL SCIENCE TEACHER	38.5
Y.W.C.A. SECRETARY	30.3
LIFE INSUR. SALESWOMAN	25.0
BUYER	19.8
HOUSEWIFE	33.5
ELEMENTARY TEACHER	33.5
OFFICE WORKER	30.8
STENOG. – SECY.	34.5
BUSINESS ED. TEACHER	27.3
HOME ECON. TEACHER	25.0
DIETITIAN	21.8
PHYS. ED. TEACHER (COLL)	38.5
OCCUP. THERAPIST	36.0
NURSE	26.0
MATH.–SCIENCE TEACHER	25.3
DENTIST	23.3
LABORATORY TECHNICIAN	19.0
PHYSICIAN	26.5
MUSCIAN TEACHER	31.8
MUSICIAN PERFORMER	35.5
PHYSICAL THERAPIST	42.5
SHOPKEEP	30.3
FEMININITY–MASCULINITY	63 26

C | C+ | B– | B | B+ | A — LETTER GRADE

0 10 20 30 40 50 60 70

65 35 25 15 5 0 –5 M

NOTES

TESTS OF MINNEAPOLIS, MINNESOTA - FORM WEA 9-63

dual scores on the highest and most consistent scales were:

English Teacher	A, A, B+, C
Social Worker	A, A, B, B-
Social Science Teacher	A, B-, B-, B-
Lawyer	A, B+, B-, C+

Although not as clearly defined as the distinct pattern for the men's profile, it seems that a "social service" thread also runs through the interest profiles of the women.

In summary, SVIB patterns for each of the eight staff members of the Experimental Junior High School were quite consistent with the specific assignments held by these members. There was nothing in the profiles to suggest that inappropriate subject assignments had been made. Interest patterns for staff members were, in the main, quite similar to interest patterns of "successful" people in their fields.

Minnesota Teacher Attitude Inventory (MTAI)

The MTAI was designed to ". . .measure those attitudes of a teacher which predict how well he will get along with pupils in interpersonal relationships, and indirectly how satisfied he will be with teaching as a vocation" (Cook, Leeds, & Callis, n.d.). To the extent that the test is a valid measure of these goals, the experimental school staff, with one possible exception, could be expected to get along well with students and to be satisfied with teaching as their chosen profession. Strong Vocational Interest Blank scores tended to support the view that the staff was "satisfied" with their vocational choices (in the sense of contributing to construct validity).

MTAI percentile ranks for the eight staff members ranged from 18 to 98. All percentile ranks except one were above 50 on norms for academic secondary teachers with four years of training (the percentile rank for the school

clerk was obtained from non-academic secondary school norms - four years training).

One expert on the MTAI commenting on the test scores said, "I would say that you have selected a faculty which seems to be well qualified on the basis of this score with the possible exception of X. It seems that some effort should be made to check on the accuracy of X's item interpretations and other evidence be collected to see if this low score is really indicative of the way X feels about the pupils."[2]

Allport-Vernon-Lindzey Study of Values (Third Edition)

Mean scores on the Allport-Vernon-Lindzey Study of Values for four male and four female faculty members are shown below:

Scale	Male	Female
Religious	46.25	42.75
Social	45.00	43.25
Political	38.50	39.25
Theoretical	38.50	37.50
Aesthetic	36.50	41.00
Economic	33.50	32.00

As a group the staff scored quite consistently on three scales, Religious, Social, and Economic. Seven of the eight faculty members had high points (i.e. either highest score or next highest score on their profiles) on the Religious scale and six out of eight had high points on the Social scale. The Economic scale was a low point for seven of the eight members (but a high point for the eighth). In view of the usual diversity of scores on

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[2] The assistance of Dr. Cyril J. Hoyt of the University of Minnesota's College of Education in interpreting the MTAI is gratefully acknowledged.

this test according to sex and subject taught (Gage, 1963, pp. 525-527) the consistency of results among staff members is rather surprising.

Brief descriptions of the Spranger types on which the A-V-L is based are given below for the Religious, Social, and Economic Scales. These descriptions are excerpted from the A-V-L Manual (1960).

> Religious. The highest value of the religious man may be called unity. He is mystical, and seeks to comprehend the cosmos as a whole, to relate himself to its embracing totality. Spranger defines the religious man as one "whose mental structure is permanently directed to creation of the highest and absolutely satisfying value experience." Some men of this type are "immanent mystics," that is, they find their religious experience in the affirmation of life and in active participation therein.
>
> Social. The highest value for this type is love of people. In the Study of Values it is the altruistic or philanthropic aspect of love that is measured. The social man prizes other persons as ends, and is therefore himself kind, sympathetic, and unselfish. He is likely to find the theoretical, economic, and aesthetic attitudes cold and inhuman. In contrast to the political type, the social man regards love as itself the only suitable form of human relationship. Spranger adds that in its purest form the social interest is selfless and tends to approach very closely to the religious attitude.
>
> Economic. The economic man is characteristically interested in what is useful. Based originally upon the satisfaction of bodily needs (self-preservation), the interest in utilities develops to embrace the practical affairs of the business world - the production, marketing, and consumption of goods, the elaboration of credit, and the accumulation of tangible wealth. This type is thoroughly "practical" and conforms well to the prevailing stereotype of the average American businessman. The economic attitude frequently comes into conflict with other values. The economic man wants education to be practical, and regards unapplied knowledge as waste.

From these descriptions one might hypothesize that the Experimental School staff, as a whole, tended to be characterized by a love of their fellow man, a search for comprehension, and an active participation in life. Possibly these idealistic goals de-emphasized practical applications of education.

It should be stressed, however, that these are hypothetical descriptions, since the A-V-L gives relative scores. A high score on one scale necessarily results in a low score on other scales. Previous research has shown that the Social and Religious Scales are positively related and that they are both negatively correlated with the Economic Scale.

Comparison groups described in the A-V-L Manual suggest that the value systems of the Experimental School female teachers may be quite similar to female personnel and guidance workers. Rank order of values for the two groups are shown below.

Experimental School Females N=4	Female Personnel and Guidance Workers N=91
Social	Social
Religious	Religious
Aesthetic	Aesthetic
Political	Theoretical
Theoretical	Economic
Economic	Political

Male teachers in the Experimental School resembled Wisconsin secondary school teachers and administrators in that their high point was on the Religious scale. However, the Experimental School males appeared to place greater emphasis on Social values and less emphasis on Economic values than Wisconsin teachers.

Experimental School Males N=4	Wisconsin Jr. & Sr. High Male Teachers N=126	Wisconsin Jr. & Sr. High Male Administrators N=126	Male Personnel & Guidance Workers N=217
Religious	Religious	Religious	Theoretical
Social	Theoretical	Economic	Social
Political	Economic	Theoretical	Religious
Theoretical	Political	Political	Political
Aesthetic	Social	Social	Economic
Economic	Aesthetic	Aesthetic	Aesthetic

Despite the small numbers involved, the consistency of results among both males and females in the Experimental School suggests that the value patterns

were not the result of an "averaging out" of scores obtained by teachers of various subject matters.

Highest scores (top two scores) and lowest scores (bottom two scores) for the eight staff members are shown below. Totals add to more than 32 since two tied scores are included.

	No. of Faculty Scoring	
	High	Low
Religious	7	1
Social	6	1
Aesthetic	2	3
Political	1	2
Theoretical	0	3
Economic	1	7

Minnesota Multiphasic Personality Inventory (MMPI)

Seven staff members took the MMPI (Hathaway & McKinley, 1943). One teacher was hired after this phase of the testing had been completed. All profiles were roughly within normal limits. Significant elevations occurred in two cases, but profile configurations for these two persons indicated socially adequate and appropriate appearance.

Interpretations of each profile were made "blind" by an experienced clinical psychologist who was supplied with the knowledge of age level, sex, and profession.[3] The most consistently used descriptive words appearing in these interpretations were "active" or "energetic" (six cases) and "socially outgoing" (four cases).

In short, the profiles suggested a group of active, outgoing, essentially "normal" people.

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[3] We are indebted to Dr. Thomas Kiresuk, Hennepin County General Hospital for this assistance.

The Meyer Social Attitudes Questionnaire

This instrument is a 40 item questionnaire dealing with social values. According to its author, Henry J. Meyer of the University of Michigan, the items. . ."are intended to assess the positions of individuals on 10 relatively independent dimensions of social values. These values are believed to be of relevance throughout American society. They are of particular concern to those whose interests are directed toward general social welfare, such as social workers, teachers, and similar professions" (Meyer, 1962).

Purportedly, high scores on the test, and each of its 10 dimensions, represent value positions consistent with those espoused by professional social work, i.e. more "liberal" points of view. Meyer correctly points out the developmental nature of the test.

Some sample items are shown below. A four point forced-choice response format is used ranging from definitely disagree to definitely agree. A neutral or undecided response is not permitted.

- People can actually do very little to change their lives.
- People should live among their own kind.
- Everyone who is in need, no matter what the reason, has a right to expect to be helped.

A frequency distribution of responses for the eight staff members was returned to the faculty for its consideration of possibly conflicting "social values." It was felt that a discussion of the various social views held by the staff would enable it to resolve its differences and become a more effective teaching team.

Mean scores of faculty members on each of the 10 dimensions of the Meyer Questionnaire are shown in Table 1. A brief explanation of each dimension is presented in the table. Also included are mean scores for a group of

Table 1

Mean Scores on Each of Ten Dimensions of the Meyer Social Attitudes Questionnaire for Samples of Businessmen, College Students, and First Year Faculty Members of the Experimental Junior High School

Scale	Business Men Dec. 1964 N=22	College Students Nov. 1964 N=22	Experimental Jr.H. Faculty Feb. 1965 N=8
1. Public Aid: The government should assume responsibility for helping people vs. Private effort: This is desirable because government services damage the society and individuals.	6.36	10.31	11.13
2. Personal Freedom: The individual has a right to act according to his own dictates vs. Societal Controls: Controls should be exercised over individuals to protect society and for the individual's own best interests.	8.14	10.04	9.00
3. Personal Goals: The individual (his happiness, his interests) should be put first vs. Maintenance of Group: The group (family, society) is more important than the individual's personal goals.	9.00	10.69	9.50
4. Social Causation: A person's situation depends less on himself than on circumstances; vs. Individual Autonomy: A person more or less determines his own situation autonomously.	8.48	10.73	10.75
5. Pluralism: Heterogenity in association is desirable vs. Homogeneity: It is better for persons to associate with those like themselves.	10.86	13.08	13.50

Continued - next page

Table 1 - Continued

Scale	Business Men Dec. 1964 N=22	College Students Nov. 1964 N=22	Experimental Jr.H. Faculty Feb. 1965 N=8
6. Secularism: Conventional religion and religious beliefs should not be controlling vs. Religiosity: Conventional religion and religious beliefs should be followed by all.	8.91	11.68	11.00
7. Self-determinism: The person, not fate, determines his own destiny vs. Fatalism: A person's destiny is determined by fate.	12.23	12.23	12.63
8. Positive Satisfaction: A person is better if his needs and desires are readily satisfied in his life vs. Struggle-denial: In the puritan tradition, suffering builds character.	8.43	9.88	9.63
9. Social Protection: Society should take care of those who need help regardless of their own efforts vs. Social Retribution: People should have to suffer the consequences of their own lack of effort.	8.00	10.65	11.63
10. Innovation-change: These are desirable and should be sought vs. Traditionalism: Commitment to ways of the past which should be supported.	9.91	10.88	11.50

businessmen and a group of college students. The businessmen were members of a service organization similar to the Rotarians and Kiwanis. One of the projects of these men involved working with low income children on a continuing basis. The college students were a group of volunteers working with low income children (Murton, Faunce, & Neale, 1966).

Comparison of the mean scores tends to contribute to the construct validity of Meyer's Questionnaire. Scores of faculty members were higher than scores of businessmen on each of the ten dimensions. Meyer's theoretical formulation would have predicted this result since higher scores indicate more liberal value orientations and teachers are usually considered more liberal than businessmen. Along these same lines, college students scored higher than businessmen on nine of the ten dimensions and had the same mean score as the businessmen on the remaining dimension.

Faculty members scored higher than college students on six of the ten dimensions. Statistical tests of significance were not made, but it appears that, to the extent that the questionnaire is a valid measure of social attitudes, there is little difference in attitudes for these groups of college students and teachers.

It should be noted that no claim can be made that this group of teachers held liberal social viewpoints. At least the results of this test cannot lead to that conclusion. Without normative data and further validation studies we can only suggest that these teachers, as a group, appeared to be more liberally oriented than a group of social service oriented businessmen and about as liberal as a group of social service oriented college students.

Faculty members appeared to <u>agree</u> most, among themselves, on values related to Scale 3, (Personal Goals vs. Maintenance of Group) and Scale 8, (Positive Satisfaction vs. Struggle-denial). It appeared that the staff would have relatively little difficulty resolving individual differences about these values since the range of response for these dimensions was very small.

By contrast, Scale 2 (Personal Freedom vs. Societal Controls) and Scale 6 (Secularism vs. Religiousity) because of the wide range of response, suggested areas of possibly strong disagreement in value orientation. One teacher scored at the extreme liberal end of Scale 2 while another teacher scored at the extreme conservative end. This polarization did not occur on any other scale.

Personal-Social Motivation Inventory

The Personal-Social Motivation Inventory is a research instrument being developed by E. Paul Torrance and his students in an attempt to measure certain aspects of creative behavior (1963b). A 100 item (3rd revision) true-false form of this questionnaire was used to gain some subjective insight into certain beliefs and philosophic viewpoints of the faculty.

An example of several items is given below:

- I never pay attention to "crack pot" ideas.
- I feel rather contemptuous of some of the people with whom I must deal.
- I enjoy doing something on the spur of the moment.

Since this was a developmental instrument it was not used to determine "creativity" of faculty members. At present the testing instrument does not perform this function. The purpose of using the inventory was two-fold. First, to provide the faculty with information about how its members felt with regard to certain beliefs, such as those illustrated above. Second, to gather data which might be useful for a retrospective study. To this end, scores on the various scales of the inventory are reproduced in Appendix A.

The Ideal Child Check List

The Ideal Child (or Pupil) Check List has been used extensively by Torrance (1964) in his cross-cultural studies of creative behavior. For the present

study, a list of 66 behavioral characteristics was presented to faculty members with instruction to indicate those characteristics which are generally desirable and should be encouraged, those which should be strongly encouraged, and also to indicate those characteristics which are undesirable and should be discouraged in children. Examples of the characteristics included on the list are healthy, industrious, talkative, and willing to take risks. Instructions and the complete list are shown in Appendix B.

Although various statistical evaluations of the check list responses have been made, including Q sort correlations and factor analysis, it was felt that such methodology was inappropriate for purposes of this study. Accordingly, total scores were reported and characteristics were ranked on the basis of these scores. A weight of two was assigned to characteristics which staff members felt should be strongly encouraged; a weight of one to those characteristics to be encouraged; minus one to those characteristics to be discouraged; and zero weight if the characteristic were not to be encouraged or discouraged.

A frequency distribution of responses to each characteristic was presented to the faculty to assist it in deciding on the kinds of behavior to be encouraged or dicouraged among Experimental Junior High School students. (See Appendix B.)

An analysis of the frequency distribution of responses to the Ideal Child Check List showed that all faculty members agreed that the following types of behavior should be encouraged or strongly encouraged in children.

Consideration of others
Curiosity
Determination
Sense of Humor
Courage in convictions
Independence in thinking
Adventurous
Altruism
Independence in judgment
Intuition
Truthful - even when it leads to trouble
Sincerity
Self-confidence
Receptive to the ideas of others

The staff was also unanimous in its belief that the following kinds of behavior should be <u>discouraged</u>.

Haughty and self satisfied
Domineering
Fearful
Negativistic
Timid

The staff showed no consensus on the desirability of 27 of the 66 characteristics. For example, four staff members reported that "always asking questions" should be encouraged while two did not indicate whether it should be encouraged or discouraged. Many of these differences, no doubt, hinged on different interpretations of the meaning of the words. The frequency distribution helped the faculty resolve differences in interpretation and to focus on those characteristics on which there was true and not just semantic disagreement.

The following characteristics are those which indicated areas of possible dissension.

Always asking questions
Becomes preoccupied with task
Does work on time
Feels strong emotions
Emotionally sensitive
Good guesser
Likes to work alone
Neat and orderly
Popular, well liked by peers
Quiet
Refined
Regresses occasionally (playful, childlike)
Remembers well
Self assertive
Self starter
Self sufficient
Sense of beauty
Spirited in disagreement
Strives for distant goals
Stubborn
Talkative
Thorough
Unsophisticated
Unwilling to accept things on mere say-so
Versatile, well rounded
Visionary
Willing to accept judgments of authorities

Torrance (1963a) has characterized the creative individual as one who is curious, sincere, determined, a self starter, independent in thought <u>and</u> judgment, industrious, courageous, and has a sense of humor. On the other

hand, the creative individual is not necessarily considerate, nor prompt. He may be timid, critical of others, domineering, negativistic, haughty and self satisfied, and disturbing of group procedures. Considering these behavioral characteristics, it appears that the Experimental School faculty was somewhat more supportive of the socially positive attributes of creative behavior (e.g. sincere) than were teachers in Torrance's sample from ten states. When the socially unpopular characteristics were considered, however, the Experimental School faculty tended to discourage behavior related to creativity (e.g. haughty and self-satisfied) in much the same way as did teachers in Torrance's sample. See the bottom items on Table 2. (Table 2 is based on eight respondents while the frequency distribution in Appendix B is based on only seven respondents. One teacher completed the test after the frequency distribution had been made.) Experimental School teachers also emphasized consideration for others over all other characteristics. This characteristic, Torrance believes, often impedes creative behavior.

In summary, results from the Ideal Child Check List revealed some characteristics which the staff agreed should be encouraged and other characteristics which it felt should be discouraged. For 27 of 66 characteristics there was no clear cut agreement. Experimental School faculty generally appeared to support or discourage those characteristics supported or discouraged by teachers in several states. There was a suggestion, however, that the Experimental Junior High faculty was somewhat more supportive of socially acceptable behaviors related to creativity than were teachers in general.

Comments on creative behavior are based on the writings of one expert in a relatively uninvestigated field of scientific exploration. The relative value of creative and other, possibly antagonistic, forms of human behaviors is not discussed in this report.

Table 2

Rank Order of 66 Characteristics Based on Total Scores of Eight Faculty Members of the Experimental Junior High School

(Possible Range = -8 to +16)

Total Score		Total Score	
16	Considerate of others	6	Competitive
15	Curious		Obedient
	Determination		Self-assertive
	Independent in thinking		Strives for distant goals
	Sense of humor		Thorough
13	Adventurous	5	Emotionally sensitive
	Attempts difficult jobs		Likes to work alone
	Independent in judgment		Popular
	Intuitive		Regresses occasionally
	Self-confident		Willing to accept judgments of authorities
	Truthful	4	Neat and orderly
12	Courageous in convictions		Quiet
	Healthy		Unsophisticated
11	Energetic	3	Always asking questions
	Persistent		Desires to excel
	Receptive to ideas of others		Feels strong emotions
	Sincere		Never bored
10	Altruistic		Physically strong
	Courteous		Refined
	A self-starter	2	Critical of others
	Versatile		Spirited in disagreement
	Willing to take risks		Talkative
9	Industrious	1	Good guesser
	Sense of beauty		Prefers complex tasks
	Socially well-adjusted		Reserved
	Unwilling to accept things on mere say-so	0	Fault-finding
			Stubborn
8	Does work on time	-3	Conforming
	Self sufficient		Fearful
7	Affectionate	-4	Disturbs group procedures
	Remembers well		Timid
	Visionary	-5	Domineering
6	Becomes preoccupied with tasks		Negativistic
		-7	Haughty and self-satisfied

Scoring Key

+2 strongly encourage
+1 encourage
0 neither encourage nor discourage
-1 discourage

Teacher Opinion Questionnaire

This instrument is an experimental device designed to gauge teacher attitudes toward culturally disadvantaged children. A series of statements about disadvantaged children is responded to along a four or five-point continuum ranging from strongly agree to strongly disagree. The form used in this study consisted of 50 items and a five-point response scale which included a ?, or "don't know," response. Sample items are shown below.

- Culturally disadvantaged youngsters are no different from other youngsters in wanting to get along in school.
- Teaching the culturally disadvantaged requires more stamina than anything else.
- School can overcome formidable bad home and neighborhood influences.

A frequency distribution of responses for each item was returned to the faculty for its consideration.

Substantial agreement on 16 of the 50 items was observed. Included in these items were such statements as:

- Teaching culturally disadvantaged children merits extra salary. (agree)
- The manners and even the appearance of a child tell very little about ability. (agree)
- Those described as culturally disadvantaged may not be disadvantaged at all; their culture may be rich in desirable values. (agree)

There was a wide range of response for 34 items. Much of this disagreement could easily be attributed to the crude and ambiguous wording of many items in this experimental measuring instrument. But some disagreement appeared "real." For example, responses to the following items ranged from strongly agree to strongly disagree.

- A teacher can be confident that a culturally disadvantaged youngster may succeed in life.
- A child's ability to benefit from education does not depend on his social or cultural background.
- School can overcome formidable bad home and neighborhood influences.
- There is something wrong with the character of a child who defaces his desk with a knife.
- There is no reason for the discipline of culturally disadvantaged children to be any more strict than that of any other group of pupils.
- When culturally disadvantaged pupils harm what belongs to the school they are acting out the aggressiveness typical of their social class.

Responses to items such as these suggested that the faculty was not in accord on at least some of the basic tenets which were to guide the school's operation. Observation of faculty meetings and faculty members own statements made it clear that these differences were not superficial, but strongly held opposing beliefs or philosophies.

A complete listing of the items may be found in Appendix C.

Summary - Characteristics of the Experimental School Staff - The First Year

The results of a battery of personality, vocational interest, and attitude tests suggest that the first year faculty for the Experimental Junior High School was a group of normal, active, outgoing people with sincere interests in their fellow man, and, generally, basically healthy attitudes toward children. Vocational interests were consistent with the specific job assignments held. While this faculty team appeared to be typical in the sense of being quite similar to a cross section of teachers in the Minneapolis School System, and while it appeared to be normal in personality traits and the like, some difficulties were suggested by item analyses of several developmental tests. These analyses suggested rather divergent opinions in the area

of philosophy of teaching and in teaching methods. Observations of staff activities during the first few months supported the findings of the tests, or more correctly, one should say that the tests were consistent with observations of the activities of the staff. Some of the differences suggested by the tests appeared to be quite basic to teaching whether in an experimental setting or not. For example, differences of opinion existed as to whether the children should be encouraged to ask questions or not, whether they should be directed to do their work on time, to be neat and orderly, to be quiet, to develop a liking for working alone, to be self-assertive, self-sufficient, and so on. While some of these opinions reflected a philosophy about children in general, others reflected a philosophy about culturally disadvantaged children in particular. Thus, teachers disagreed on whether a beginning teacher should be placed with disadvantaged children or not, and whether or not disadvantaged children <u>really</u> have a chance to succeed in life.

No doubt, a certain amount of disagreement or controversy about philosophy of education is unavoidable among any group of teachers and is even desirable to a certain degree. However, the disagreement among this group of teachers appeared to be so extensive and so antithetical as to be detrimental to the progress of the Experimental School. It is difficult to see how a faculty can truly be an effective team when some members are attempting to prepare the children for a traditional high school while other teachers feel that such an approach would be self-defeating - since the children were in an experimental program because they were failing in the traditional setting.

Selection of First Year Students for the Experimental Junior High School: 1964-1965

Considerable care was taken in selecting the first students to enter the experimental school. A serious attempt was made to select students who were economically disadvantaged and who were not benefiting from school. One control group of students was selected using the same methods. Procedures for selecting the two groups were as follows:

1. Faculty members of Lincoln Junior High School were asked to list the names of all Lincoln students who were not profiting from their present school situation and who would probably drop out of school. Forty-three teachers, out of forty-five, listed one or more names, yielding a total list of 265 names. Approximately 28% of the total school population of 944 students was listed. This percentage appeared reasonable to school administrators.

2. The Experimental School faculty reviewed cumulative record cards of all seventh and eighth grade students at Lincoln, without recourse to the teachers' nominations. A decision was made to exclude ninth grade students from the first year of the Experimental School for the following reasons:

   a. They would be at the school only two months before graduating. Inclusion in the program would require them to be in three different school settings within a very short time period.

   b. They would probably be unwilling to change schools at this late stage in their junior high careers.

   c. Including them would limit the opportunity to develop student leaders for the second year of the demonstration.

3. Based on their review of the records, the Experimental School faculty compiled an independent list of nominees for the program. This list was made by group decision. Criteria for inclusion on the list were as follows:

   a. Declining scores on tests of mental ability over time. (California Test of Mental Maturity, Otis, Lorge-Thorndike, given variously in grades 2, 4, 6 and 7).

   b. Scores lower than 40th percentile on the Reading, Vocabulary and Comprehension sub-scales of the Iowa Tests of Basic Skills (seventh grade).

c. Poor attendance - generally ten or more days missed each year.

d. Teacher comments (on each card) indicating lack of interest in school and negative, aggressive behavior.

e. High mobility (four or more address changes).

f. Family disrupted by divorce, separation, desertion, etc.

Each criterion met by a child <u>increased</u> his chances of being included in the experimental school faculty list of nominees.

4. The list compiled from the records analysis was compared with the list proposed by the Lincoln faculty. The two lists were so close to being identical that it was decided to work with the Lincoln teachers' recommendations in order to gain greater acceptance of the selection.

5. Comments made by Lincoln counselors and administrators were taken into consideration and a few deletions were made from the list (e.g. "Is going to move out of district").

6. All students living outside the YDP Target Areas were removed from the list.

7. Target Area students on the list were stratified by grade, sex, and race. Selection of forty-seven students for grade seven and a like number for grade eight were made by the Intern Principal and the YDP Research Unit using a table of random numbers (Walker & Lev, 1953).

8. Forty-four students at each grade level were assigned to experimental or control groups by coin toss. Additionally, three students at each grade level were designated as alternates.

9. Minor adjustments in the final roster were made so that the two groups had a ratio of two boys to each girl and two white students to each non-white student. These ratios reflected the proportions of males to females in the teachers' listing and the proportion of whites to non-whites in the total Lincoln Junior High School population. Racial characteristics approximated the Lincoln population rather than the nominated population since racial identification was not available for the nominated students.

The composition of experimental and control groups at the start of the first year was 15 boys and 7 girls in each grade (7 and 8). Four Negro males and two Negro females were in each grade along with eleven Caucasian males and five Caucasian females.

The social and economic conditions of the YDP Target Areas have been described in detail in several reports (Community Health and Welfare Council, 1964; Faunce, Bevis and Murton, 1965; Murton & Faunce, 1966).

Selection from these low income areas, and the procedures described above, left little doubt that the children in the program were among the most disadvantaged children in the city. What little doubt there was, was soon dispelled by observation of classroom activities and by the test data reported in the following sections.

First Year Results - Baseline Data on Experimental and Control Students

This section describes the tests given to experimental and control students at the start of the first year - April 1965. Students were retested two months later, just prior to summer vacation, although it was not anticipated that substantial changes would be revealed. The only justification for retesting was that, at the time, there appeared to be a good possibility that the project would not be continued and that even if it were it appeared unlikely that resources for evaluation would be available. Thus, the retesting was carried out as a "salvaging" operation.

Three areas were explored: reading achievement, self concepts, and attitudes toward school and related topics.

Gates Reading Survey[4]

In April 1965 and in June 1965 experimental and control students were given the Gates Reading Survey, Grades 3.5-10. (Gates, 1958). Using the results of the pretest on this instrument, the experimental students were divided into two instructional groups. The Remedial group included students reading two or more grades below actual grade placement on the comprehension score of the test. The Developmental group read less than two grades below actual grade level.

In the experimental program, students had daily reading instructions from a remedial reading teacher using materials specially selected for this group of students. Class size averaged about 8 pupils. For the first two weeks of instruction, the time spent in class each day fluctuated as various schedules were tried. During the last six weeks, classes were 45 minutes in length. One week of this time was spent in individual testing by the reading teacher.

Pretest Comparisons

At the beginning of the program, the experimental group scored .25 grades higher than the control group on the total score. Pretest grade equivalent scores for the total experimental group (i.e. Remedial plus Developmental) were 6.45 (speed), 5.60 (vocabulary), 5.63 (comprehension), and 5.88 (total) respectively. For the control group, pretest scores were 6.36 (speed), 5.14 (vocabulary), 5.42 (comprehension) and 5.63 (total). None of the t-tests between pretest scores of the two groups were statistically significant at the .10 level. (See Table 3.)

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[4] Reading tests were administered by Mrs. Rosemary Hagen, the Remedial Reading teacher for the Experimental School. Analysis of test results was conducted by Mrs. Bonnie Murton of the Youth Development Project.

Table 3

Pre (April 6, 1965) and Posttest (June 10, 1965) Mean Grade Equivalent Scores on the Gates Reading Survey for Experimental and Control Students

Group	Speed		Vocabulary		Comprehension		Total	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Experimental Remedial N	23	23	25	25	25	24		
Mean Grade	5.60	5.74	4.78	4.96	4.79	4.80	5.04	5.16
Experimental Developmental N	18	18	18	18	18	18		
Mean Grade	7.53	7.46	6.73	7.01	6.79	6.67	7.02	7.05
Experimental Total N	41	41	43	43	43	42		
Mean Grade	6.45	6.53	5.60	5.82	5.63	5.60	5.88	5.98
S.D.	1.79	2.27	1.47	1.71	1.59	1.58	1.64	1.87
Control Total N	38	32	39	32	39	32		
Mean Grade	6.36	6.18	5.14	5.34	5.42	4.97	5.63	5.50
S.D.	2.23	2.45	1.83	2.03	1.96	2.17	2.06	2.26
t-test values between experimental and control means	.19	.64	1.26	1.12	.53	1.44		

Posttest Comparisons

On the posttest the experimental group scored 6.53 (speed), 5.82 (vocabulary), 5.60 (comprehension), and 5.98 (total), respectively. The control group scored 6.18, 5.34, 4.97, and 5.50, respectively. The experimental group ended the two month school period about one-half grade higher than the control group. This nonsignificant difference between the experimental and control groups on the posttest was made up about equally by a rise of one-tenth of a grade level by the experimental group and a drop of a similar magnitude by the control group. The fact that not all the control students were tested might have unduly influenced the average scores for this group, especially on the posttest. Students absent from school or avoiding the test might have differed from those tested. Scores of tested students might not truly represent the entire control group. In any event, the posttest scores of experimental and control groups were not significantly different.

Students Gaining or Losing

Further comparisons were made of the number of students who gained or lost between the two test dates, regardless of the magnitude of the change. (Table 4.)

Comparing the number of students gaining to the number of students either gaining or losing, no significant differences were found within any of the groups, by Sign Test. There were no significant differences in the number of students changing either way--gain or loss, for any of the sub-test scores, for either group.

Table 4

Students Gaining or Losing

Group	No. Gaining	No. Losing	No. Unchanged	Total No.	Sign Test 2 tailed p
Experimental					
Remedial					
Speed	7	13	1	21	p = .50
Vocabulary	8	15	2	25	p = .21
Comprehension	11	12	1	24	p = .99
Developmental					
Speed	6	9	3	18	p = .60
Vocabulary	8	10	0	18	p = .80
Comprehension	7	9	2	18	p = .80
Remedial & Developmental					
Speed	13	22	4	39	p = .18
Vocabulary	16	25	2	43	p = .21
Comprehension	18	21	3	42	p = .75
Control					
Speed	11	14	6	31	p = .69
Vocabulary	10	19	3	32	p = .14
Comprehension	14	16	2	32	p = .86

Approximately one-fourth of the students in both experimental and control groups gained more than six months between pre and posttests (Table 5). For the experimental students who gained more than six months in the three areas, the median gains were about one and one-half grades respectively. Gains for controls were similar. Another one-fourth of the students in both groups lost six months or more between testing dates. The median loss for experimental and control students for speed, vocabulary, and comprehension was approximately one year. Of the students in both groups who gained or lost less than six months, the average change was near zero.

Table 5

Number of Experimental and Control Students Gaining or Losing on the Gates Reading Survey by Magnitude of Gain or Loss

Group	Experimental			Control		
	N	%	Median Change (Grades)	N	%	Median Change (Grades)
Total	44	100.0%		45	100.0%	
Males	30	68.2		31	68.9	
Females	14	31.8		14	31.1	
Grade 7	21	47.7		25	55.6	
Grade 8	23	52.3		20	44.4	
Students Gaining More than 6 Months						
Speed	10	25.6	1.5	8	25.8	1.4
Vocabulary	11	27.9	1.8	10	31.3	1.0
Comprehension	12	28.6	1.2	5	15.6	1.0
Students Losing More than 6 Months						
Speed	13	33.3	-.8	7	22.6	-1.6
Vocabulary	10	23.6	-1.2	5	15.6	-.8
Comprehension	14	33.3	-1.2	13	40.6	-1.2
Students Gaining or Losing 6 Months or Less						
Speed	16	41.0	-.3	16	51.6	-.4
Vocabulary	22	48.8	.2	17	53.1	.3
Comprehension	16	38.1	.2	14	43.8	.4

Chi-square - Experimental vs. Control; Gaining vs. Losing vs. Unchanged (d.f.=2)

Speed - - - - - - - - - 1.13, p = .6[illegible] - .80
Vocabulary - - - - - 0.73, p = .60 - .80
Comprehension - - - - 1.99, p = .20 - .40

Change Scores - Pre Minus Posttest

Mean change scores (pre minus posttest scores) for the experimental students in the three areas of reading skill were found not to differ from the mean change scores for control students. The t-test values for the three skill areas and the total score were near zero and in no case did they approach significance. The t values were .11 (speed), -.04 (vocabulary), .27 (comprehension), and .07 (total score).

Summary - Reading Achievement

Results on the Gates Reading Survey showed that experimental and control students scored similarly at the start of the Experimental School Program. Two months later, the groups also obtained similar scores on the Gates. Analyses of change scores and of individual student gains and loses gave strong evidence that the two groups did not change greatly during the period of observation.

These results should not be interpreted pessimistically. In addition to the very short exposure time, a couple of other factors probably worked to limit possible gains. First, the program was initiated near the end of the school year. Some teachers aver that major gains in learning are more likely to come earlier in the school term. Second, physical conditions of the "reading room" in the Experimental School were not conducive to effective instruction during the early months.

Reading test results have two positive values. They contribute one more bit of evidence that the experimental and control groups were extremely well matched and they lay a base for long range evaluation.

Self Concept

The Tennessee Self Concept Scale is a recently developed instrument designed to provide a "widely applicable, well standardized, and multi-dimensional"

description of self concept (Fitts, 1965). The scale consists of a booklet containing 100 brief statements such as "I am a friendly person," "I get angry sometimes," and "I should trust my family more." Instructions inform the testee to respond to the items "as if you were describing yourself to yourself." Response categories are completely false, mostly false, partly false and partly true, mostly true, and, completely true.

Two forms of the Scale are available, the Counseling Form, and the Clinical and Research Form. The Clinical and Research Form was administered to experimental and control groups in April and again in June 1965.

Description of the Tennessee Self Concept Scale

Self Criticism (SC)

This scale is the same as the L Scale of the MMPI. High scores indicate a healthy capacity for self criticism. Low scores suggest a deliberate effort to present a favorable picture.

Positive Scores (P)

Positive scores are divided two ways. First, according to how a person describes himself - using an "internal frame of reference," i.e. an idiographic score. Three subscores are derived from this internal frame of reference approach.

1. Row 1 - This is what I am. Row 1 scores describe a person's basic identity - what he is as he sees himself.
2. Row 2 - This is how I feel about myself. Row 2 scores yield a measure of self-satisfaction, i.e. how a person feels about the self he perceives.
3. Row 3 - This is what I do. Row 3 scores measure the individual's perception of his own behavior.

The three row scores are added to yield a Total Positive (Total P) score. This score reflects the overall level of self esteem. Persons with high scores tend to like themselves, have confidence, and feel that they are persons of worth and value.

Five other Positive scores are obtained by rescoring the items from an external frame of reference viewpoint.

Physical Self (Column A). Here the individual is presenting his view of his body, his state of health, his physical appearance, skills, and sexuality.

Moral-Ethical Self (Column B). This score describes the self from a moral-ethical frame of reference--moral worth, relationship to God, feelings of being a "good" or "bad" person, and satisfaction with one's religion or lack of it.

Personal Self (Column C). This score reflects the individual's sense of personal worth, his feeling of adequacy as a person and his evaluation of his personality apart from his body or his relationships to others.

Family Self (Column D). This score reflects one's feelings of adequacy, worth, and value as a family member. It refers to the individual's perception of self in reference to his closest and most immediate circle of associates.

Social Self (Column E). This is another "self as perceived in relation to others" category but pertains to "others" in a more general way. It reflects the person's sense of adequacy and worth in his social interaction with other people in general.

Thus, there are 9 Positive (P) scores, three related to an internal frame of reference, five related to an external frame of reference, and one overall

measure of self esteem. The overall measure (P) is probably the most important single score in the entire Scale.

In addition to the 9 Positive scores, the Scale is also scored for variability or response (V), distribution of response (D), and time required to complete the Scale.

All of these scores are obtained for the Counseling Form. The Clinical and Research Form yields additional measures.

True-False Ratio (T/F). This is a measure of response set or response bias, an indication of whether the subject tends to agree or disagree regardless of item content.

Net Conflict - This score indicates the extent to which an individual's responses to positive items (I am a good person) conflict with his responses to negative items in the same area of self perception (I am a bad person).

Total Conflict - High scores on this scale indicate confusion, contradiction, and general conflict in self perception.

Six Empirical Scales derived by item analysis are also described. These scales are pretty much what their titles intimate and will not be described in detail. They are: General Maladjustment (GM), Psychosis (Psy), Personality Disorder (PD), Neurosis (N), Personality Integration (PI), and Defensive Positive (DP). The Defensive Positive scale provides a more subtle measure of defensiveness than the Self Criticism Scale.

Finally, a measure known as the Number of Deviant Signs (NDS) is obtained. The NDS score is simply a count of the number of deviant features on all other scores. Fitts describes the NDS score as the Tennessee Self Concept Scale's best index of psychological disturbance. Its scoring is based on the hypothesis that individuals who deviate sharply from the norm in minor behaviors are likely to be deviant in more major aspects of behavior.

Tennessee Self Concept Scale - Results

Mean and variance scores for pretest and posttest of the experimental and control groups are shown in Table 6. Tests of significance are shown in Table 7.

Or the pretest comparison only three of the 28 significance tests were found to be significant beyond the .10 level. The same number of significant differences were found for the posttest comparison of experimental and control groups, although these differences were found on different segments of the test. In short, at the beginning of the program there appeared to be no great difference in self concepts of experimental and control groups as measured by the Tennessee Self Concept Scale. At the close of the program, in June 1965, no difference between the two groups was observed. A comparison of change scores for experimental and control groups revealed only one significant difference beyond the .10 level and this difference was for one of the distribution scores.

In spite of the fact that the difference between the two groups did not appear to widen there is some evidence that certain changes in both groups took place. Thus, the importance of the control group is emphasized. A comparison of the pretest scores and the posttest scores for the experimental group showed that there were significant differences on ten of the 28 tests while for the control group there were significant differences on nine of these tests. In most cases these changes were on the same measure. It appears that whatever changes did take place were not the result of the Experimental Junior High School program but were probably due to some other factor such as maturation, time of the year, or some other influence .

The results from the Tennessee Self Concept Scale should not be considered as disappointing or unexpected in view of the very short time period of exposure to the program. Rather, these figures should be taken as baseline data for a long range evaluation of the effects of the Experimental Junior High School. They are also very useful for emphasizing the similarity between

Table 6

Tennessee Self Concept Scale Means and Variances for Experimental and Control Groups Pre and Posttests

(Pre = March 31, 1965; Post = June 3, 1965)

	Experimental (N = 39)				Control (N = 33)			
	Pretest		Posttest		Pretest		Posttest	
	Mean	Variance	Mean	Variance	Mean	Variance	Mean	Variance
Self Criticism	37.44	28.99	36.72	27.79	36.91	45.96	37.58	34.81
T/F	140.85	2949.40	112.69	2524.38	141.09	2353.09	120.88	1192.42
Net Conflict	8.92	484.07	2.33	334.60	9.42	355.19	1.24	236.69
Total Conflict	42.67	177.75	36.41	90.62	41.48	108.63	37.55	83.32
Total Positive	318.49	847.05	312.56	1148.41	327.36	470.36	322.33	890.48
Row 1	119.49	114.41	116.10	97.15	125.18	166.78	119.85	152.57
Row 2	97.51	171.62	97.08	271.44	99.67	141.98	98.45	147.63
Row 3	101.64	116.50	100.67	113.86	104.33	78.35	104.03	132.53
Col. A	70.85	43.40	68.56	53.57	73.94	48.18	71.64	81.24
Col. B	60.87	63.69	60.03	70.39	63.52	32.26	62.33	42.67
Col. C	61.23	44.81	61.56	54.94	62.64	39.05	62.42	51.88
Col. D	63.77	70.13	62.59	92.88	64.09	95.09	63.36	104.61
Col. E	61.87	43.75	61.10	46.41	63.18	30.97	62.79	31.55
Total Variability	51.74	177.62	50.31	244.59	55.79	219.61	55.00	310.75
Col. Total Variability	30.97	82.87	29.59	117.41	33.09	122.34	32.55	122.13
Row Total Variability	20.77	29.87	20.46	45.52	22.70	51.41	22.52	75.76

Table 6 - Continued

	Experimental (N = 39)				Control (N = 33)			
	Pretest		Posttest		Pretest		Posttest	
	Mean	Variance	Mean	Variance	Mean	Variance	Mean	Variance
D	113.28	944.79	100.97	823.13	121.82	805.47	115.42	749.44
5	20.54	158.94	14.38	106.56	22.64	148.05	19.67	164.29
4	23.87	92.22	23.67	88.60	23.73	82.64	24.36	105.61
3	25.10	144.83	30.05	216.52	21.48	120.32	22.42	116.94
2	12.33	42.02	15.82	59.05	11.18	53.03	14.76	75.44
1	18.15	95.08	16.08	70.97	20.97	79.78	18.79	80.98
DP (N = 38)	52.79	100.33	49.54	128.15	56.36	129.24	52.70	144.22
GM "	88.45	89.33	87.56	89.67	90.94	71.87	89.52	98.13
Psy. "	52.29	30.32	51.36	32.39	52.42	59.19	53.03	54.53
PD "	59.82	160.86	61.13	157.80	61.88	67.61	63.06	71.06
M "	78.79	73.68	76.36	79.29	83.97	67.16	80.18	119.22
PI "	7.47	21.99	8.28	12.21	9.24	39.69	8.24	12.69

Table 7

Summary of Significant t Tests on Tennessee Self Concept Scales for Experimental (E) and Control (C) Students of the Experimental Junior High School (Experimental N=39, Control N=33)

Scale	E vs. C Pretest	E vs. C Posttest	Experimental Pre vs. Post	Control Pre vs. Post	Change Scores Exp vs. Cont
Self Criticism	--	--	--	--	--
T/F	--	--	.01	.05	--
Net Conflict	--	--	.01	.05	--
Total Conflict	--	--	.01	--	--
Total Positive	--	--	--	--	--
Row 1	.05	--	.05	.05	--
Row 2	--	--	--	--	--
Row 3	--	--	--	--	--
Col A	.10	--	.05	.10	--
Col B	--	--	--	--	--
Col C	--	--	--	--	--
Col D	--	--	--	--	--
Col E	--	--	--	--	--
Total Variability	--	--	--	--	--
Col Total Variability	--	--	--	--	--
Row Total Variability	--	--	--	--	--
D	--	.05	.01	.05	--
5	--	.10	.01	.05	--
4	--	--	--	--	--
3	--	.05	.01	--	.10
2	--	--	.01	.01	--
1	--	--	.10	--	--
DP	--	--	--	.10	--
GM	--	--	--	--	--
Psy	--	--	--	--	--
PD	--	--	--	--	--
M	.05	--	--	.05	--
PI	--	--	--	--	--

Pretest March 31, 1965; Posttest June 8, 1965

the two groups at the beginning of the program. In short, they supply strong evidence that the experimental and control groups were well matched.

These initial data are also useful for describing the population involved in this program. The picture given by the Tennessee Self Concept of the experimental and control groups is that they were both ~~were~~ were similar at the start of the program and that both groups deviated considerably from the norms for so called typical youth. Fitts, the author of the test, states that those who selected the subjects were successful in identifying a group of children which is:

A. High on acquiescent tendencies (T/F and Net Conflict) suggesting that they probably have an external locus of control, are suggestible, easily influenced by others, have poor ego strength, impulse control, etc.

B. High in general dissonance, confusion, and contradiction in the way they view themselves (Tot. Conflict).

C. Low in self-esteem (P Scores) in all areas but physical but with particular reference to their functioning or behavior, moral, family, and social adequacy.

D. High in variability of self-perception (V Scores) indicating less integration or consistency of self-regard across the different areas.

E. Somewhat uncertain, or unguarded perhaps, in their approach to self-description (D, and other Distribution Scores) and that they became more so during the experimental period.

F. High in signs of maladjustment (Empirical Scales) and lacking in personality strength (PI Scale).[5]

The sum total of these results, according to Fitts, is that the personality picture given was essentially similar to persons with personality or character disorders. He also points out that the group, (i.e. the experimental and control group) showed much less variation in response than is usually the case.

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[5] Dr. Fitts, Personal Communication, August 5, 1966.

This suggests that the total group of subjects showed a considerable degree of similarity to each other - that there were some marked tendencies characterizing the group as a whole.

Fitts comments "It is also interesting here to test the general hypothesis that this total group (Experimental and Control) would present a general picture of psychological maladjustment on this scale. I tested this by combining means from both groups and comparing these with the norms. All scores were used except the 5, 4, 3, 2, 1 scores (which help differentiate type of pathology better than degree of pathology). The MDS Score was also included in this since it would clearly be above the mean for both groups. This makes 24 variables and this group deviates in the undesirable direction on 21 of these. Also these would probably all be statistically significant if tested against the large N of the norm group."

Fitts also points out that the self concept, as measured by the Tennessee Self Concept Scale is a pretty stable variable which does not change unless there is a highly significant experience or a substantial period of time involved in which new experiences and skills are integrated into behavior patterns.

Semantic Differential

A pretest (April 1965) and posttest (June 1965) of a form of the Semantic Differential was administered to experimental and control students.

The semantic differential used was patterned from the instrument developed by Osgood, Tannenbaum, & Suci (1957). It presented twelve concepts, each to be rated by means of seven point scales separating ten pairs of bi-polar adjectives. Students were instructed to rate each concept by putting checks between the paired adjectives. Concepts and adjective pairs were presented in the order listed on the following page.

Concepts Rated	Bi-Polar Adjectives
School	Good - Bad
Car	Unfair - Fair
Reading a book	Kind - Cruel
Friend	Foolish - Wise
Going to college	Friendly - Unfriendly
Cop	Weak - Strong
Working	Energetic - Lazy
Teacher	Hard - Soft
Juvenile delinquency	Relaxed - Tense
Family	Fast - Slow
Myself	
Being a good citizen	

Bi-polars were selected to cover three major dimensions (Evaluative, Potency, Activity) (Osgood et al., 1957, p. 36). Changes in mean ratings on each adjective pair for the ten concepts were very slight over the two month period. Experimental and control groups scored similarly at both testing periods. Semantic profiles were drawn and because of the almost indentical profiles for experimental and control groups on both the pretest and the posttest, no further statistical analyses were performed. Means and variances for these scores are given in Appendix D.

Semantic Profiles for Experimental and Control Students - Combined Results

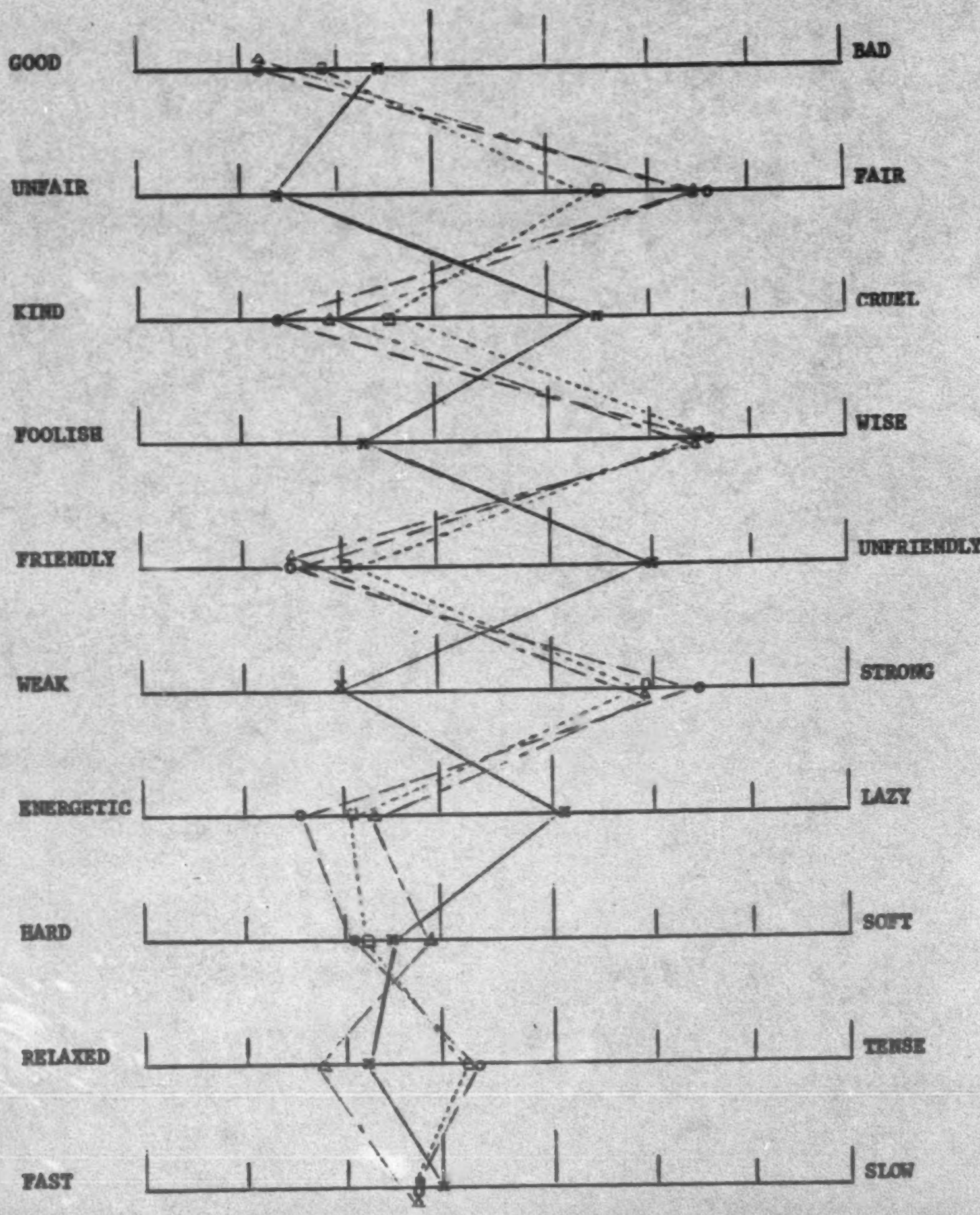
Educational Concepts

Although experimental and control students did not differ greatly in profile configuration at the beginning nor end of the first year of the program the profiles for the combined groups revealed some interesting information.

Related concepts were grouped into categories. Profiles for each of these related concepts were drawn. The concepts Teacher, School, Reading a Book, and Going to College were labelled "Educational Concepts." Profiles for Educational Concepts are shown in Figure 3. These profiles are based on posttest mean ratings of the combined experimental and control samples (N=73). Three of the concepts showed a distinctly similar pattern. Going to college, Reading a Book, and School were seen by the average student as relatively

Figure 3

Educational Concepts



good, fair, kind, wise, friendly, strong and energetic. While results on the hard-soft, relaxed-tense, and fast-slow pairs were not distinct, it is clear that the profile configuration for College, Reading a Book, and School was quite different from the profile for Teacher. Teacher was seen as relatively good, but unfair, cruel, foolish, unfriendly, weak, and lazy. Since semantic profiles were approximately the same on pretests and posttests it seems certain that this view of teachers reflected attitudes toward teachers which had developed prior to entrance into the Experimental Junior High School.

What this seemingly negative view of teachers really means is open to conjecture. Possibly the profile reflects the "teachers' dirty looks" stereotype. At the same time, Books belong in this stereotype and kids are certainly not "supposed to" like School. One might argue that this view of teachers reflects a more general attitude toward all authority figures but this view is contradicted by the generally favorable profile for Cop. (To be discussed later.)

Certainly more evidence is needed before one can feel confident about taking these results at face value. Semantic profiles based on responses of children living in more affluent areas of the city would be informative. A paper by Neale and Proshek (1966) bears on this point. They compared semantic profiles of children in one low income and one middle income elementary school in Minneapolis. Using a factor analysis approach they found Osgood's three major dimensions, with Evaluation accounting for over one-third of the total variance. Comparisons on the Evaluative dimension revealed low income children to be more favorably inclined toward My School Building and My School Books. Low income children gave significantly lower ratings of My Teacher ($p < .005$) and Reading a Book ($p < .10$). Despite the differences between low and middle income children, all (mean) responses to all the concepts were in the positive direction. That is, low income children were less favorable toward Teacher than middle income children but the profile for low income children was still closer to the "good" side of the scale than it was to the

"bad" side. Mean profiles for students in the Experimental Junior High School were decidedly on the "bad" end of the continuum.

The Neale-Proshek paper and the results from the Experimental Junior High School support the view that low-income children have relatively unfavorable views of teachers. In addition, it appears that these children's views of many concepts related to education are not unfavorable in an absolute sense (School, Going to College, Reading a Book) and that in certain respects their views of education may be more favorable than the views of middle income children (My School Building, My School Books). Regardless of the necessary caution that must be used in interpreting studies of this nature, the data are sufficiently strong to indicate that whenever one hears the statement "Low income kids don't like school" or "Culturally disadvantaged children are not interested in education" the proper rejoinder whould be "Just what are you talking about?"

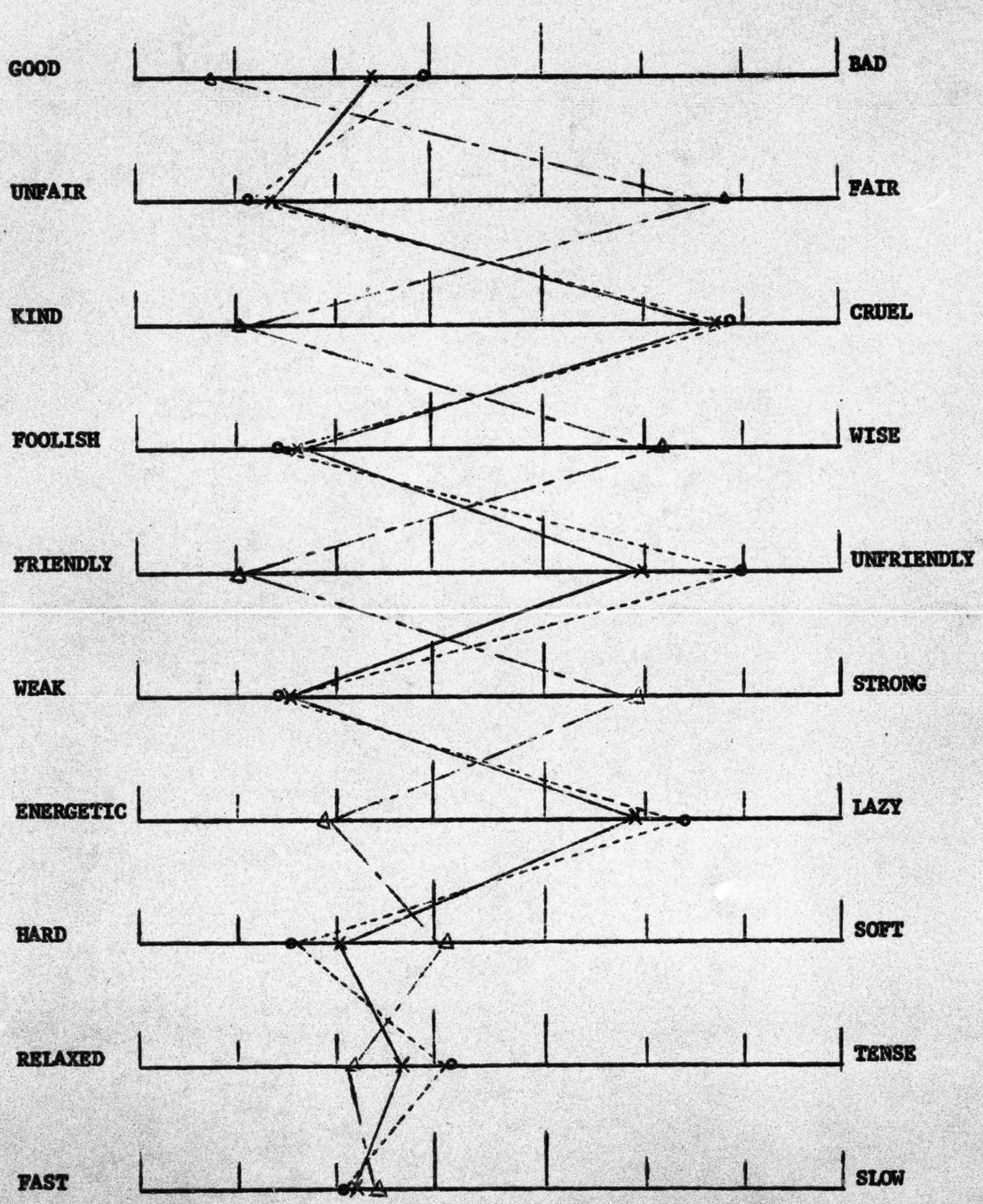
Concepts of Personal Relations

Three concepts clustered under the heading "Personal Relations." These concepts were Family, Friend, and Myself. Figure 4 shows their semantic profiles. Again there was a rather distinct difference in patterning. Friend was consistently rated on the positive sides of the scale while Family and Myself were generally rated on the negative sides.

The low ratings of self and family were consistent with results on the Tennessee Self Concept Scale. These ratings, it might be added, were also logically consistent with the lives of disadvantaged and minority youth from low income, disrupted homes, whose school experience had been considered as a failure by their teachers up to the time they entered the experimental program.

Figure 4

Personal Relationships Concepts



Citizenship Concepts

Four concepts were given the arbitrary title of "Citizenship." These concepts were Cop, Working, Juvenile Delinquency, and Being a Good Citizen. In this grouping, three of the four concepts clustered on the positive sides of the scale. Surprisingly the divergent concept was not Cop, as the literature might lead one to expect, but Being a Good Citizen. Juvenile Delinquency, Cop, and Working, were all rated favorably. Being a Good Citizen was seen as good, but unfair, cruel, foolish, unfriendly, weak, lazy, hard, relaxed, and fast. This pattern of ratings was similar to those of Teacher, Myself, and Family. Possibly this negative view of citizenship is related to the teaching of good citizenship by teachers - or to the students' view that teachers are themselves considered to be "good citizens" by the community. See Figure 5.

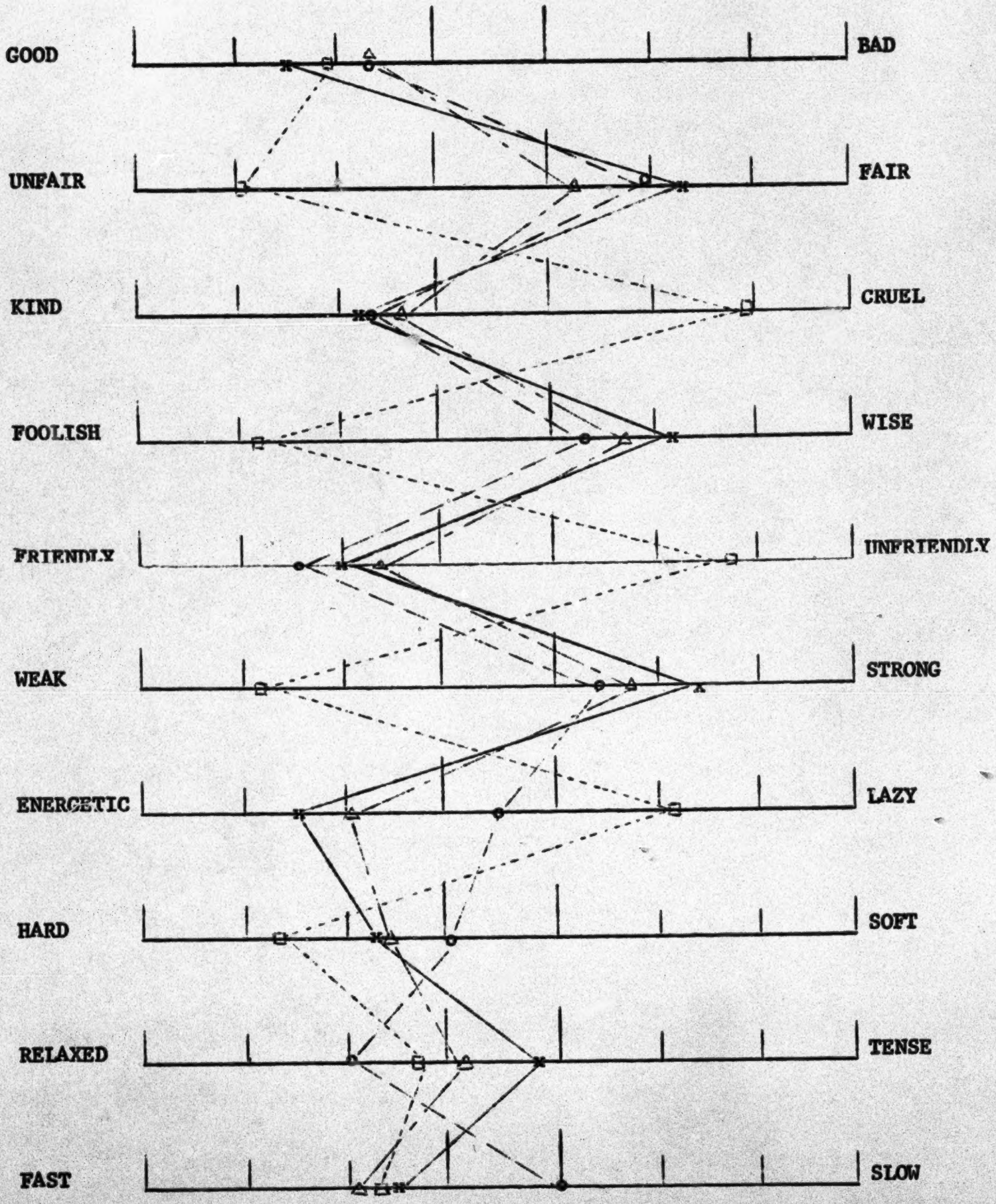
Summary - Semantic Differential Results

Results on the Semantic Differential revealed consistent ratings for experimental and control groups at the start of the program and two months later at the close of the first school year. Ratings on the positive sides of the scale were made for School, Going to College, Reading a Book, Friend, Working, Juvenile Delinquency, and Cop. Negative ratings were made for the concepts Myself, Teacher, Family, and Being a Good Citizen.

Although these ratings were not always consistent with expected results (e.g. Cop) they did not appear to result from dissembling by the children. Ratings of Myself and Family were in the expected direction and were supported by a standardized measure of self concept. Favorable attitudes toward educational concepts (college student, my school building, my classroom, and my school books) were reported by an independent study of low income elementary school children. The concept Car, not previously discussed, was given consistently favorable ratings, as expected.

Figure 5

Citizenship Concepts



If these ratings represent honest opinions of the students, and we suspect they do, then two major questions remain, what do the ratings mean? and what do we do about it? Meaning is going to require further exploration, but the initial experience with the students should help formulate testable hypotheses. Comparisons with middle income control groups would be desirable for exploring the relativity of the ratings.

Accepting the ratings at face value, one might hypothesize that these students, experimental and control alike, are characterized by having low opinions of themselves and their families, but high opinions of their friends. Some middle class values such as having a good education or a job are seen as desirable - even though not always attainable, but the major communicators of middle class values, the teachers, who epitomize the "good citizen" are rejected. Juvenile delinquency, per se, is not bad since it is aimed at the middle class and its communicators. Cops are not seen as communicators, or perhaps even as members, of the middle class but as employees of it. Their role in the lives of the children is clear cut and the children adapt to it. The role of the teacher is less clear and the variance in teacher behavior is probably greater, making adaptation more difficult.

Some minor support for this interpretation is given by a field survey of a neighborhood serving one of the elementary feeder schools of the Experimental School. This survey (Faunce, 1965) revealed that Negro adults felt there was more unfair (i.e. discriminatory) treatment by school teachers than by police.

In view of the essentially negative results on the Semantic Differential scales relating to self concept and on the Tennessee Self Concept scale one might be inclined to conclude that for the brief period of exposure during the first year of the Experimental Junior High School there was no movement or improvement in the self concept of experimental students. This conclusion may be incorrect. Another measure of self concept was administered to the students by E. Paul Torrance and Nicholas C. Aliotti of the Department of

Educational Psychology, University of Minnesota. This was a relatively specific measure of self concept involving the students' perceptions of themselves as related to their ability to solve problems. Using a measuring instrument devised by Covington and Crutchfield of the University of California at Berkeley these two investigators found significant improvement in self concepts concerning problem solving adequacy. These results have been described elsewhere and will not be repeated here. However the general conclusions are given below.

> Although we cannot be certain how stable will be the changes in self concepts concerning problem solving adequacy reflected in the data reported herein, the changes appear to be generally and fairly consistently in a favorable direction, in so far as the experimental subjects are concerned. It must be admitted that some of the differences between the changes among the experimentals and controls is due to changes in reference groups precipitated by the initiation of the project which placed the experimentals in separate classes and for the most part in a separate building. Nevertheless, the evidence is encouraging and suggests that the initial stages of the project may have set in motion changes in self concept concerning problem solving adequacy that will facilitate learning as the project moves into its second stage in the fall of 1965 (Torrance & Aliotti, 1965).

In summary, the measuring instruments related to self concept which were administered during the first year of the project showed that experimental and control groups had very similar self perceptions, that perceptions of self and family were very negative and that generally there was little movement in overall self concept although there was the possibility that some improvement was taking place in the experimental students' opinions of themselves as problem solvers.

Lincoln Learning Center - An Experimental Junior High School
The Second Year 1965-66

The first full year of the Experimental Junior High School began in September 1965. Much of the initial experience gained during the preceding year was lost when funding of the program became insnarled in the federal bureaucratic procedure. The Youth Development Project was absorbed by the war against poverty and ceased to exist as a demonstration project. Evaluation of the Experimental Junior High School was taken over by the newly formed Federal Projects Research Team of the Minneapolis Public Schools. In view of the heavy burden placed on this team by the passage of Public Law 89-10 and the large number of programs funded under this law it is no surprise that some continuity of evaluation was lost in the change-over from the Youth Development Project to the Federal Projects Research Team. Evaluation of 22 projects funded under Title I was attempted by this small team and has been reported in the booklet "Evaluation, Title I Projects, Elementary and Secondary Education Act" (Special School District No. 1, Minneapolis, Minn., 1966). Evaluation of the Experimental Junior High School second year is described in this booklet on pages 37-57. No attempt will be made here to repeat these descriptions although some comments will be made on the procedures used in order to provide a continuity to the first two years of the program and to set the stage for subsequent evaluation.

Some significant program changes took place during the second year of the school. For the first time ninth graders were involved. In addition, several staff changes were made.

No pretesting was done at the beginning of the second year, possibly due to the pressures caused by the number of programs to be evaluated. Posttest evaluation was conducted in May 1966. Apparently the originally selected control group was not used at this time. A comparison group was selected from the Lincoln Junior High School on the basis of "poor achievement, low test scores, irregular attendance, and poor attitude toward school."

The authors point out that this did not constitute a true control group. Methods of selecting the comparison group and the measurements used are not described.

A rather large number of measuring instruments was used to evaluate the children's progress in five areas: (1) achievement, (2) attitude, (3) teachers' ratings, (4) school attendance, and (5) parent opinions.

Achievement

Two achievement measures were used, the Iowa Tests of Basic Skills (ITSB) and the Gates Reading Survey - Form 2. Comparative data are given for six of the 11 tests in the ITBS battery and although there were few significant differences the experimental group did appear to be higher on 20 of the 24 tests which were made. It is not clear from the report whether or not the entire 11 tests in the battery were given. Data are given for six tests only.

The reading, vocabulary and the level of comprehension sections of the Gates Reading Survey were compared. Four of the eight comparisons were statistically significant and in three of these four the experimental group was significantly higher than the control group. On seven of the eight tests run the experimental group was higher.

Attitudinal Changes

Four measuring instruments designed to measure attitudinal change were used. A form of the Semantic Differential with 12 stimulus words was used. Only 6 of the words are reported in the booklet, those being the stimulus words on which significant differences were obtained. The rationale for the selection of these words is not clear and it appears that this was a breakdown in communication between the YDP researchers and the Federal Projects Research Team. It is difficult to interpret the meaning of the results on this Semantic Differential in view of the omitted data and in terms of the concepts used.

An Adjective Check List consisting of 24 terms to which students could respond in relation to their feelings about school was used as a measure of attitude. The authors reported that the control students tended to select more negative terms than did experimental students. Only one response pattern, however, proved statistically significant. No data are given for this measuring instrument.

The Student Attitude Scale consisted of 70 multiple choice terms relating to various aspects of the school. Comparisons were made for the eighth and the ninth grades only. At the eighth grade level there were no significant differences while for ninth graders Experimental School students appeared to be more favorably inclined toward school than control students.

A Describe Your School Inventory was completed by seventh grade students. On this instrument, Experimental students showed slightly more favorable responses to school than did control students, but the difference was not statistically significant.

No reference sources are given for any of the attitudinal measurements. In addition, data are incomplete in many cases. Data which are presented tend to give the picture that experimental students appear somewhat more favorably inclined toward school than the group with which they are being compared.

Teachers' Ratings

Teachers were asked to rate their students on four factors (1) classroom achievement in relation to others, (2) classroom achievement in relation to ability, (3) energy level, (4) citizenship. Results were mixed with two measures favoring the Experimental students and one measure favoring the control group.

Attendance

No significant differences in attendance or tardiness were found. No data are given.

Parent Opinions

A questionnaire was mailed to parents soliciting opinions about the high school programs. That is, control group parents were asked about Lincoln Junior High School while experimental group parents were asked about the Experimental Junior High School. Less than half the parents returned the questionnaires in each group. Return appeared to be about the same for both groups. Five questions were asked about the schools. On four of the five questions the Experimental School parents seemed to be more favorably inclined toward the Experimental School than did control parents toward Lincoln Junior High School. On the fifth item there was no difference. While the authors report statistically significant differences on two of the tests, it seems that inappropriate tests were applied here. However, there is no denying that on four of the five items the direction of response was more favorable for the experimental group.

The authors conservatively and rightly conclude the following about the measurement of second year results:

> To assert clear cut superiority of the experimental program in this evaluation would be unwarranted in light of the methods used in data collection. It is true, nonetheless, that a preponderance of differences between control and experimental classes favored the latter. Attitudinal and achievement measures did tend to demonstrate certain experimental group advantages, but the most pronounced area of experimental superiority was on parent opinions. For whatever reason, these adults perceived a more positive school-pupil relationship than their control counterpart.

While the cautious language used in this conclusion is commendable one would

have to take issue with the claim that parent opinions as reflected by the mailed questionnaire are the "most pronounced area of experimental superiority." Based on the evidence at hand one might be encouraged by the second year findings even though there is not a clear cut statistical superiority for the experimental group. In 51 of the 67 comparisons which could be counted in the report the direction favored the experimental group. Unfortunately, this may not be a true reflection of the actual situation since much of the data and the attendant statistical tests were not included. No doubt this was a practical necessity based upon the large number of programs being evaluated and the need to keep an evaluation report involving 22 projects within some reasonable bounds. Despite excluded data, one is left with the feeling that certainly the experimental group is not worse off than the control group, and that possibly advances have been made. One would be even more content with this conclusion if a more detailed description of the comparison group being used had been given.

Summary - The First Two Years

First Year Evaluation Results

Evaluation during the first year focused on the careful selection of an experimental and control group from the same junior high school population. In addition, data were collected to give a base against which future progress could be measured in the areas of reading ability, certain aspects of self concept, and attitudes toward school, work, and related subjects.

Uncertainty about the future of the program and its evaluation precipitated retesting of the students only two months after they first entered the school. No substantial changes were noted for either experimental or control groups in reading achievement, the attitudes measured, or for most aspects of self concept. Significant differences favoring the experimental group were found on one measure of self concept related to the student's perception of himself as a problem solver.

First year results demonstrated dramatically the similarity of experimental and control group students. The two groups were matched on the basis of age, sex, grade, race, residence, and indirectly on school achievement, attitudes toward school, and family situation. The results of the tests showed that the close matching was also reflected by the measuring instruments used. On the Gates Reading Survey, both experimental and control groups were reading one or more grades below the normal level; over half the students were retarded two or more grades. Self concept tests revealed both groups to be highly suggestible, to have poor ego strength, poor control over their impulses, to be confused about themselves, to have low self-esteem, and to show particular concern about their behavior, their morals, and their role as a family member. Test profiles were similar to those of juveniles with personality or character disorders. Results from the Tennessee Self Concept Scale and the Semantic Differential were consistent in contributing to this picture of the students. In addition, the Semantic Differential suggested

that the students had relatively favorable views of education, work, and police but unfavorable views of self, teachers and good citizens. These results left no doubt that the students for whom the Experimental Junior High School had been designed were indeed involved in the program.

Summary - Second Year Evaluation Results

Evaluation for the second year was conducted by a new evaluation team since one of the projects originally sponsoring the program had folded due to lack of funds. Although this change caused some transitional problems many of the same aspects of the program were evaluated during the second year.

Five major areas were explored. These were achievement, attitudes, teacher opinions, attendance, and parent opinion.

Achievement was measured by the Iowa Tests of Basic Skills and the Gates Reading Survey. In addition teacher ratings of achievement were obtained. Attitudes were measured by four instruments: Semantic Differential, Adjective Check List, Attitudes Scale, and Describe Your School. The major thrust of these four instruments was toward measuring attitudes toward school. In addition, teachers made ratings of citizenship. A mail survey was used to obtain parent opinions about the school. Although statistically significant differences between control and experimental groups were few and far between, a rather consistent tendency for experimental students to score more favorably than control students was apparent. Of 67 statistical tests (which appeared in the report), 51 were in the positive direction for experimental students. Unfortunately this conclusion is somewhat clouded by the fact that the original control group was not used and no data were given for the comparability of the subsequently selected comparison group.

Comments

It seems necessary to make an additional comment about this experimental school program. Necessary because the research data present only a small, and inadequate, part of a much larger whole. From a broad view, this evaluation would have to be described as selective, fragmentary, inconsistent, short range, and incomplete. No attempt was made to evaluate many aspects of the program (e.g. curriculum development). Two independent research teams, funded by different sources, were involved - without adequate opportunity for continuity of effort. Criterion data, to this point, are extremely short range.

In short, the value of the school should not be judged solely by what the formal evaluation of the school reveals - whether it be favorable or unfavorable! To do so would fly in the face of common sense.

It is indeed unfortunate that a program which offers so much opportunity for exploration and discovery of new methods, approaches, and ideas must relegate such discoveries to armchair evaluation and musings that "I think this is what happened." Without adequate <u>and</u> consistent funding for evaluation efforts we are stuck with such armchair approaches - even though partial funding may allow the purchase of a somewhat more streamlined armchair.

Recommendations for Future Evaluation of the Experimental Junior High School

1. Some of the data which already have been collected have not been intensively analyzed. For example, results on the Tennessee Self Concept Scale have been evaluated by group comparisons. It may well be that individual changes have taken place which are masked by these group comparisons. An investigation of individual change (such as that made of the Gates) should be made and a comparison of students who changed favorably with those who may have changed unfavorably might reveal those children for whom this particular program is appropriate. This exploration might suggest needed changes in curriculum.

2. One of the most clear cut results of the project was the excellent matching of experimental and control subjects during the first year. A serious attempt should be made to continue to test the same people. It is reported that many of the control subjects have moved from the Lincoln Junior High School district while most of the experimental students have remained. This in itself may be a significant finding. It may be possible to track down those students who have moved and to continue to keep them in the control group. If this is not possible then more stringent descriptions of subsequent control groups are needed. It is also true, assuming the program continues, that we will have to continue to select control students. If we cannot select these students at the time they are brought into the program then it is possible (at the close of the program or whenever we make the final evaluation) to go back to the records and select students who had similar characteristics at the time the program or semester began.

3. Greater attention should be paid to describing Experimental Junior High School staff. Unfortunately, since participation in the project might have some effect on the staff, those who have been involved could not be tested on a comparable basis to those who were tested before becoming involved with students.

4. The Tennessee Self Concept Scale and the original form of the Semantic Differential should be administered to students in May 1967. The Tennessee Self Concept Scale is a very awkward scale to score and if it is possible these tests should be mailed to the central scoring bureau.

5. Since the Gates Reading Survey was given both the first year and at the end of the second year it is possible to make some comparisons on a retest basis. That is, compare the tests given in May 1966 with those given in April 1965. If the Gates Reading Survey were also administered to students throughout the school system it would be possible to get results for students in the control group.

6. Reactions of parents should be obtained by some method other than mail, if at all possible. Parents in both control and experimental groups should be contacted individually and a standard interview format used to obtain their impressions about school.

7. Arrangements should be made for long term follow-up of students who have attended the Experimental Junior High School. We might predict that those who have spent the most time in the experimental school would show the most favorable attitudes toward continuing their education. This suggests that they would be more inclined to graduate from high school, to hold favorable attitudes toward high school, to show better attendance at the high school level, etc. Some of these measures, of course, can be obtained long after the students have left the experimental situation.

8. The Title I projects evaluation booklet states that the Iowa Tests of Basic Skills were given to the students at the beginning of the first year. These could be compared with results from the second year Iowa Tests of Basic Skills.

9. If a long term project evaluation is anticipated it may be possible to set up an evaluation design which would take cognizance of possible Hawthorne effects. At present, this investment appears too costly for the expected returns.

Appendix A

Scores of Faculty Members on the Personal - Social Motivation Inventory (3rd Revision)

Teacher	Creative	Critical	Power
1	---------- No Test ----------		
2	30	6	12
3	36	8	12
4	24	4	1
5	26	4	18
6	29	6	6
7	30	7	8
8	28	6	12
Mean Men	28.50	5.75	12.50
Mean Women	29.67	6.00	6.33
Combined Mean	29.00	5.86	9.86
Variance	14.33	2.17	29.50

Appendix B

YOUTH DEVELOPMENT PROJECT - RESEARCH UNIT

Instructions for Administering the Ideal Child Check List

(Read aloud all words appearing in capital letters)

THIS CHECK LIST IS DESIGNED TO FIND OUT THE KINDS OF BEHAVIOR YOU THINK SHOULD BE ENCOURAGED OR DISCOURAGED IN CHILDREN. WHAT KIND OF PERSONS WOULD YOU LIKE THEM TO BECOME? DESCRIBE THE KINDS OF BEHAVIOR YOU THINK SHOULD BE ENCOURAGED OR DISCOURAGED BY USING THE CHECK LIST.

FIRST: READ THE LIST AND CHECK EACH OF THE CHARACTERISTICS WHICH YOU THINK IS GENERALLY DESIRABLE AND SHOULD BE ENCOURAGED.

(Administrator: Wait until everyone has completed this task before proceeding. Allow about five minutes. If everyone is not finished at that time urge them to finish as rapidly as possible. After a minute go to the next section.)

SECOND: DOUBLE CHECK EACH OF THE CHARACTERISTICS WHICH YOU CONSIDER ESPECIALLY IMPORTANT AND SHOULD BE STRONGLY ENCOURAGED.

(Administrator: Use the same procedure as in the previous section.)

THIRD: DRAW A LINE THROUGH THESE CHARACTERISTICS WHICH YOU CONSIDER UNDESIRABLE AND SHOULD BE DISCOURAGED OR PUNISHED.

(Allow about five minutes and then say:)

PLEASE BE CERTAIN THAT THE DATE AND THE GROUP YOU BELONG TO ARE RECORDED BEFORE HANDING IN YOUR PAPERS.

Appendix B

Frequency Distribution of Responses to the Ideal Child Checklist Made by Seven Faculty Members of the Experimental Junior High School - March 1965

A	B	C	D		A	B	C	D	
4	3			Adventurous	5	1	1		Persistent
	7			Affectionate		3	4		Physically strong
4	3			Altruistic (unselfish)	1	3	3		Popular, well-liked by peers
	4	2	1	Always asking questions		1	6		Prefers complex tasks
5	1	1		Attempts difficult jobs		5	1	1	Quiet
1	4	2		Becomes preoccupied with tasks	4	3			Receptive to ideas of others
	1	3	3	Conforming		3	4		Refined
7				Considerate of others		3	4		Regresses occasionally, (playful, childlike)
5	2			Courageous in convictions					
2	5			Courteous	2	3	2		Remembers well
2	2	3		Competitive		1	6		Reserved
	2	5		Critical of others	2	2	3		Self-assertive
6	1			Curious	4	3			Self-confident
	3	4		Desires to excel	4	2	1		A self-starter
6	1			Determination	4		3		Self-sufficient
		4	3	Disturbs group procedures	4	1	2		Sense of beauty
3	2	2		Does work on time	6	1			Sense of humor
		3	4	Domineering	4	3			Sincere
	3	4		Feels strong emotions	2	5			Socially well-adjusted
2	1	4		Emotionally sensative		2	5		Spirited in disagreement
3	3	1		Energetic	1	4	2		Strives for distant goals
1		4	2	Fault-finding		1	5	1	Stubborn
		5	2	Fearful		2	5		Talkative
	2	4	1	Good guesser	1	4	2		Thorough
		1	6	Haughty and self-satisfied			4	3	Timid
					4	3			Truthful, even when it gets him in trouble
3	4			Healthy					
4	3			Independent in judgment		4	3		Unsophisticated
5	2			Independent in thinking	4	1	2		Unwilling to accept things on mere say-so
3	3	1		Industrious					
4	3			Intuitive	2	4	1		Versatile, well rounded
1	3	3		Likes to work alone	2	3	2		Visionary
1	3	3		Neat and orderly	1	3	3		Willing to accept judgments of authorities
		3	4	Negativistic					
1	1	5		Never bored	1	6			Willing to take risks
	6	1		Obedient					

A = Strongly encourage this behavior
B = Encourage this behavior
C = Neither encourage nor discourage this behavior
D = Discourage this behavior

Appendix C

Items of the Teacher Opinion Questionnaire and Agreement of Response for Seven Staff Members of the Experimental Junior High School

Items to which Six or Seven Staff Members Gave the Same Response. Response given is shown in parentheses.

4. Parents of culturally disadvantaged children usually have had little schooling themselves. This lack of education leads them to be indifferent to "book learning." (Agree)

7. Spare the rod and spoil the child, is specially true of culturally deprived children who have never known what it means to have standards. (Disagree)

8. School systems have been remiss in not adequately compensating teachers who have had to teach the culturally disadvantaged. (Agree)

16. A child whose parents have had little schooling or who are antagonistic towards education, will not profit a great deal from school. (Disagree)

22. Those described as culturally disadvantaged may not be disadvantaged at all; their culture may be rich in desirable values. (Agree)

26. The poor heredity that culturally disadvantaged youngsters suffer are just about the most formidable handicap a teacher of these pupils has. (Disagree)

33. Just as a Raggedy-Ann doll can be charming, so can an urchin despite patches, dirt, and smell. (Agree)

5. It is difficult to judge the character of a culturally disadvantaged child by his adjustment to school. (Agree)

11. Undoubtedly the home and neighborhood environment of the culturally disadvantaged is a handicap but it is poor heredity that ultimately defeats the culturally disadvantaged child. (Disagree)

14. Many parents of culturally disadvantaged children are eager to cooperate with the school but are absorbed in their struggle for existence. (Agree)

15. The manners and even the appearance of a child tell very little about ability. (Agree)

17. One can take it for granted that parents of culturally disadvantaged children are interested in their youngsters. This interest is the bridge that teachers can take in getting ideas across to parents. (Agree)

20. The language of culturally disadvantaged children often is picturesque, a quality sadly lacking in conventional speech. (Agree)

31. Teaching culturally disadvantaged children merits extra salary. (Agree)

36. Automation is making more and more unskilled work unnecessary. The culturally disadvantaged pupil can be educated for the skill demanded by nsw technology. (Agree)

44. Readers and other textbooks that will be used by the culturally disadvantaged should be down-to-earth because these children have short attention spans and,unfortunately, are not very imaginative. (Disagree)

Items on which there was no consensus among staff members.

2. Culturally disadvantaged children are generous and grateful. They will repay society for the patience of teachers who have worked with them.

3. When culturally disadvantaged pupils harm what belongs to the school they are acting out the aggressiveness typical of their social class.

9. Culturally disadvantaged youngsters are no different from other youngsters in wanting to get along in school.

10. A teacher never should give up on a child however difficult he may be as a pupil. That is part of the teacher's responsibility to society.

12. Given a little patience on the part of school authorities and a child of normal intelligence can adjust to school whatever be his background.

13. Although it is not easy for a child brought up in a culturally disadvantaged home to adjust to school standards, it does not take a specially gifted teacher to effect the adjustment.

18. Culturally disadvantaged children learn from their parents that it is more comfortable to be somewhat dirty.

21. It is not fair to judge a teacher by his success or failure in teaching the culturally disadvantaged because working with these children simply is so punishing.

23. A teacher will have to exert himself to motivate the culturally disadvantaged youngster but the chances are that the effort will succeed.

24. Neatness is habit. Children who do not form the habits of neatness, punctuality, and courtesy hardly can be expected to care very much about their schoolwork.

25. It is only realistic to realize that teaching the culturally disadvantaged will be more unpleasant and unrewarding then teaching middle-class children.

27. Poor English is one of the chief handicaps with which the culturally disadvantaged child is burdened. His language patterns must be changed fundamentally and quickly.

28. If the philosophy of social workers and probation officers prevailed, teachers would be so concerned about the handicaps of culturally disadvantaged pupils that academic standards would tend to be forgotten.

29. As the branch bends, the tree will grow, Children who steal or harm the property of the school are likely to grow into adults who have frequent encounters with the police.

30. A child's ability to benefit from education does not depend on his social or cultural background.

32. A teacher can be confident that a culturally disadvantaged youngster may succeed in life.

34. It is a mistake to place beginning teachers in the tough situation of having to teach culturally disadvantaged children.

35. Teaching the culturally disadvantaged requires more stamina than anything else.

37. There is no reason for the discipline of culturally disadvantaged to be any more strict than that of any other group of pupils.

38. Children from more favored environments are penalized by the presence of culturally disadvantaged children who are unable to do good school work.

39. Teachers who have been assigned teaching in schools with a large number of culturally disadvantaged children should have the first choice of transfers to more attractive schools.

40. "Spare the rod and spoil the child" is poor advice for a teacher whose pupils have been fighting.

41. Language and usage is convention and habit. Given enough time and the example of the teacher's good English, and most culturally deprived children will learn to speak acceptably.

42. There is something wrong with the character of a child who defaces his desk with a knife.

43. It would seem that just about the last thing culturally disadvantaged parents think to buy is soap.

45. Children who fight can learn that there are other ways of getting along. Punishing those who fight really is not necessary.

46. School can overcome formidable bad home and neighborhood influences.

47. Culturally disadvantaged children come from homes and neighborhoods where it is more wrong to be caught stealing than it is to steal. Immorality is bred into these children and the discipline of the school must be just as severe as that of the home if the school is to win out in the battle for character.

48. It is difficult to compensate for the fatigue of teaching culturally disadvantaged children.

49. A teacher of the culturally disadvantaged cannot help but be intolerant of language usage that is certain to block the way of the child in later life.

50. Three years is a long stint of teaching the culturally disadvantaged.

APPENDIX D

Table 8

Pretest Means and Standard Deviations on a Seven Point Semantic Differential for 44 Experimental (E) and 41 Control (C) Students in the Experimental Junior High School - April 1965

Concept			Bipolar Adjectives									
			1	2	3	4	5	6	7	8	9	10
School	Mean	E	2.11	5.43	2.27	5.89	2.34	5.93	2.29	2.95	3.84	3.45
		C	2.88	5.24	2.80	5.83	3.22	5.56	2.61	3.02	4.10	3.44
	S.D.	E	1.17	1.47	1.30	1.42	1.15	1.07	1.08	1.51	1.73	1.93
		C	1.61	1.73	1.64	1.32	1.96	1.23	1.64	1.37	1.74	1.90
Car	Mean	E	1.45	6.11	2.52	4.93	3.14	6.25	2.49	2.79	3.18	1.39
		C	1.66	6.37	2.73	5.24	2.63	6.02	2.10	2.71	3.19	1.68
	S.D.	E	.89	1.35	1.51	1.83	1.78	1.19	1.88	1.90	1.91	.80
		C	1.26	1.22	1.70	1.59	1.49	1.44	1.51	1.82	1.98	1.16
Book	Mean	E	2.25	5.75	2.70	5.36	2.61	4.93	2.82	3.39	2.86	4.14
		C	2.10	5.88	2.54	6.00	2.76	5.51	3.02	3.83	2.44	4.19
	S.D.	E	1.83	1.60	1.69	1.92	1.58	1.76	1.76	1.67	1.88	1.78
		C	1.75	1.67	1.83	1.55	1.83	1.61	2.00	1.74	2.05	1.84
Friend	Mean	E	1.39	6.36	1.75	4.91	1.86	5.45	2.59	3.91	3.00	2.93
		C	1.27	5.95	1.97	4.97	2.10	4.59	3.61	3.69	3.17	3.90
	S.D.	E	.80	1.09	1.17	1.89	1.60	1.42	1.80	1.66	1.67	1.63
		C	.66	1.50	1.33	2.03	1.50	1.81	2.28	1.63	1.68	1.76
College	Mean	E	1.75	6.32	2.07	6.36	1.86	6.18	2.21	2.53	3.93	2.93
		C	1.90	6.13	2.46	6.45	2.05	6.03	1.95	2.47	3.47	3.13
	S.D.	E	1.42	1.06	1.14	.95	.94	1.03	1.17	1.35	2.04	1.72
		C	1.64	1.60	1.77	1.28	1.56	1.40	1.36	1.41	1.95	1.98
Cop	Mean	E	3.05	4.77	3.60	5.28	3.53	6.21	2.63	2.63	4.63	3.14
		C	3.59	4.02	4.07	5.00	3.57	5.85	2.88	2.53	3.95	2.93
	S.D.	E	1.93	2.22	2.27	1.78	2.04	1.15	1.43	1.51	1.92	1.89
		C	2.35	2.28	2.23	2.02	2.34	1.84	2.28	1.66	2.27	2.21
Work	Mean	E	1.70	5.27	2.86	5.98	2.66	5.64	2.36	2.39	4.57	3.28
		C	2.19	5.22	3.20	5.71	2.83	5.85	1.88	2.32	4.41	2.71
	S.D.	E	1.10	1.89	1.77	1.45	1.64	1.46	1.26	1.51	1.93	1.97
		C	2.01	2.10	2.05	1.88	1.99	1.46	1.29	1.37	1.95	1.66
Teacher	Mean	E	N.A.	3.42	4.37	3.53	5.60	3.02	4.86	3.28	3.05	4.23
		C	N.A.	3.15	4.61	3.27	5.17	3.33	4.68	3.39	3.25	4.44
	S.D.	E	N.A.	2.13	2.11	2.12	1.67	1.76	1.73	1.73	1.60	1.91
		C	N.A.	2.07	2.05	1.96	2.02	2.16	1.94	2.13	1.87	1.99
Juvenile Delinquent	Mean	E	3.56	5.58	3.12	5.16	3.12	4.95	3.74	4.02	3.30	5.44
		C	3.17	5.83	2.78	5.56	3.27	5.15	4.90	4.15	3.02	5.17
	S.D.	E	1.76	1.89	2.18	2.09	2.21	1.98	2.44	2.17	2.28	1.83
		C	1.82	1.89	2.04	1.68	2.35	1.98	2.01	2.34	2.07	1.89
Family	Mean	E	3.33	1.11	6.61	1.48	6.36	1.50	6.09	1.98	4.02	2.43
		C	3.17	1.46	6.12	1.59	6.39	1.80	6.07	2.12	3.85	2.97
	S.D.	E	2.33	.38	.71	.89	.93	1.08	1.44	1.51	2.18	1.75
		C	2.23	1.21	1.68	1.21	1.27	1.55	1.37	1.70	2.24	1.94
Myself	Mean	E	2.82	1.98	5.52	2.35	5.09	2.09	5.32	2.64	2.82	3.09
		C	2.97	1.63	6.20	1.95	5.55	1.95	5.57	2.53	3.17	2.85
	S.D.	E	1.90	1.36	1.45	1.41	1.57	1.10	1.52	1.68	1.61	1.82
		C	2.03	1.07	1.29	1.50	1.61	1.50	1.74	1.82	1.84	1.81
Citizen	Mean	E	2.73	1.59	5.89	2.14	5.68	1.98	5.84	2.18	3.41	3.05
		C	2.47	1.59	6.22	1.80	6.24	1.80	6.17	2.02	3.27	2.73
	S.D.	E	1.84	1.21	1.48	1.47	1.71	1.32	1.40	1.45	1.89	1.83
		C	1.57	1.21	1.32	1.37	1.16	1.31	1.32	1.20	1.68	1.61

Table 9

Posttest Means and Standard Deviations on a Seven Point Semantic Differential for 40 Experimental (E) and 33 Control (C) Students in the Experimental Junior High School - June 1965

Concept			Bipolar Adjectives									
			1	2	3	4	5	6	7	8	9	10
School	Mean	E	2.23	5.03	2.87	5.85	2.43	5.23	2.53	2.63	3.77	3.50
		C	2.51	4.82	2.94	6.12	2.82	5.64	2.55	2.85	4.06	3.09
	S.D.	E	1.40	1.46	1.40	1.54	1.58	1.40	1.22	1.35	1.75	1.80
		C	1.73	1.88	1.76	1.45	1.91	1.72	1.69	1.73	1.82	1.66
Car	Mean	E	2.23	5.50	2.90	5.00	2.80	5.75	2.65	2.50	3.46	1.74
		C	1.63	5.81	2.50	5.94	2.75	6.00	1.87	3.41	3.16	1.59
	S.D.	E	1.75	1.70	1.69	1.82	1.65	1.56	1.81	1.61	2.05	1.19
		C	1.29	1.70	1.64	1.52	1.97	1.30	1.24	2.23	2.08	1.14
Book	Mean	E	1.97	5.45	2.43	5.74	2.43	4.87	2.97	3.50	2.57	3.57
		C	2.03	5.88	2.67	6.27	2.24	5.64	2.97	3.85	2.51	3.45
	S.D.	E	1.49	1.83	1.46	1.46	1.34	1.57	1.57	1.84	1.64	1.79
		C	1.73	1.67	1.73	1.33	1.71	1.43	1.93	1.91	1.67	1.89
Friend	Mean	E	1.36	6.20	1.82	5.76	1.61	5.61	2.49	3.69	2.77	3.08
		C	1.45	6.29	1.77	5.71	2.03	5.13	2.68	4.03	3.13	3.16
	S.D.	E	.95	1.24	1.41	1.35	1.19	1.21	1.34	1.63	1.45	1.54
		C	.91	1.17	1.24	1.55	1.45	1.77	1.71	1.89	1.83	1.87
College	Mean	E	1.82	6.00	1.87	6.31	2.05	6.08	2.13	2.50	4.00	3.28
		C	1.64	6.15	2.09	6.18	1.97	5.70	2.06	2.82	3.94	3.33
	S.D.	E	1.50	1.52	1.18	1.22	1.39	1.29	1.30	1.77	2.01	1.83
		C	1.53	1.67	1.74	1.78	1.66	2.01	1.86	1.93	2.19	2.21
Cop	Mean	E	2.47	4.90	2.85	5.07	2.70	5.43	2.57	2.80	3.67	2.43
		C	3.13	4.52	3.34	5.44	3.06	5.31	2.55	2.91	4.03	2.53
	S.D.	E	1.87	2.14	1.89	1.81	1.82	1.81	1.67	1.66	1.71	1.58
		C	2.19	2.42	2.33	2.23	2.15	2.31	2.28	1.91	2.24	1.92
Work	Mean	E	2.27	5.50	2.93	5.40	2.55	5.75	2.25	2.87	4.00	3.53
		C	1.97	6.16	2.55	6.21	2.39	6.03	2.15	2.64	4.51	2.55
	S.D.	E	1.71	1.79	1.74	1.55	1.73	1.49	1.24	1.75	1.86	1.75
		C	1.59	1.45	1.62	1.32	1.61	1.62	1.67	1.93	1.84	1.76
Teacher	Mean	E	N.A.	2.72	4.95	2.92	5.33	2.54	4.82	2.95	3.31	2.95
		C	N.A.	2.94	4.97	2.70	5.79	2.36	4.48	2.87	2.79	4.15
	S.D.	E	N.A.	1.80	1.91	1.67	1.51	1.63	1.75	1.57	1.80	1.62
		C	N.A.	2.27	2.30	2.09	1.67	1.84	1.95	1.93	1.84	2.09
Juvenile Delinquent	Mean	E	3.23	5.44	2.87	4.93	2.17	5.05	3.78	3.85	2.46	4.90
		C	2.82	5.55	3.12	4.94	2.57	4.91	4.45	3.67	3.18	4.33
	S.D.	E	1.54	2.13	2.17	2.27	1.69	2.14	2.38	2.47	1.83	2.06
		C	2.02	2.00	2.18	2.09	2.01	2.08	2.30	2.22	2.21	2.17
Family	Mean	E	3.02	1.59	6.12	1.83	6.27	1.71	6.07	1.97	3.55	2.34
		C	3.64	1.22	6.34	1.56	6.41	1.52	5.94	1.81	3.61	2.59
	S.D.	E	2.08	1.06	1.50	1.45	1.28	1.35	1.47	1.39	2.32	1.68
		C	2.27	.65	1.38	1.06	1.22	1.16	1.67	1.23	2.10	1.65
Myself	Mean	E	2.83	2.15	6.00	2.27	5.37	2.29	5.49	2.68	3.12	2.63
		C	2.75	1.79	6.27	1.94	5.73	1.73	5.30	2.51	3.18	2.94
	S.D.	E	1.69	1.42	1.33	1.38	1.41	1.42	1.48	1.52	1.85	1.57
		C	1.60	1.17	1.05	1.25	1.42	.96	1.82	1.67	1.75	1.76
Citizen	Mean	E	2.41	1.70	6.20	1.97	6.03	2.00	5.55	2.17	3.28	2.87
		C	2.45	1.33	6.64	1.51	6.39	1.57	6.09	1.82	3.18	2.64
	S.D.	E	1.46	1.36	1.40	1.40	1.51	1.38	1.66	1.45	1.89	1.73
		C	1.67	.72	.85	.99	1.07	1.05	1.54	1.22	2.14	1.77

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